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Educational News and Editorial Comment

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Senator Harrison on Federal Aid to Education

As the readers of the *Elementary School Journal* are aware, Senator Pat Harrison of Mississippi introduced in the Seventy-fifth Congress a bill providing for federal aid to education in the states. Since that time the President's Advisory Committee on Education has made its report, and a new bill is now before the Congress. In view of these facts, interest attaches to the following statement of Senator Harrison, which appeared in a recent issue of *State Government*.

As far as I have been able to determine no advocate of federal assistance to the states for education stands for any policy or legislative provision that would result in the federal control of our schools. Both the proponents and opponents of this type of federal aid are agreed that under our form of democratic and representative government the national welfare will be best promoted and safeguarded by keeping the control of our public schools where it has always been, in the hands of the states and thousands of local communities and their school boards. I have never conversed with nor heard of a member of the United States Congress, since I have been a member of it, who said that he would support a bill that contains provisions for federal control of education.

Under our system of federal-state relationships it is an accepted and practiced principle that the national government can and should co-operate with the states in promoting interests of highest importance of both state and nation.

Such co-operation has been carried on, and is now being carried on successfully. Those who maintain that a policy of co-operation between the federal and state governments in the financial support of public schools must result in undesirable federal control of the schools can do so only by imputing motives that do not exist to those who favor such a policy of co-operation, and by refusing to give proper consideration to past experiences and to constitutional and statutory provisions prohibiting federal control.

It certainly will be conceded that our federal government can exercise only such powers as are delegated to it by the United States Constitution or clearly implied therein; that the Constitution does not give to the federal government or to the Congress the control or management of public education within the states; and that the Tenth Amendment to the Constitution expressly provides that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people." Certainly any legislation likely to be enacted by the Congress would embody the clearest possible declaration of the authority of the states to manage and control their public-school systems.

Starting with a false hypothesis, basing their arguments on false assumptions, and ignoring the facts of federal and state co-operation in many fields, those who have opposed federal grants to the states for education would lead the people to believe that many of the nation's leading statesmen and thousands of the nation's best recognized educators who favor federal participation in the support of education would either wilfully or ignorantly bring about conditions disastrous to our free institutions. . . . .

It is no longer a debatable question as to whether all the states can adequately support their public schools with equitable effort if they put their fiscal houses in order. The facts are now too well known to be left as a mere matter of forensic eloquence and personal opinion. As measured by per capita wealth, per capita income, per capita retail sales, or any one of a dozen or more other measures of the financial ability, and as measured by the application of each of the states of the Model Tax Plan proposed by the National Tax Association, there are insuperable differences in the ability of the different states to raise public revenues. There are some states which, if they levied all the taxes at the rates recommended by the tax experts, would not be able to raise sufficient revenue from all sources to support a school system equal to the average of the nation—even if all their revenue were spent for schools and nothing whatever spent for any other kind of state or local governmental services. Every known fact shows that the states most able to support schools can raise from six to eight times as much per pupil as the least able states. . . . .

In the early part of the Seventy-fifth Congress I introduced a bill to provide federal appropriations to the states to assist them in the support of public schools. That bill was reported favorably to the Senate by unanimous vote of the Committee on Education and Labor. The President then appointed the Advisory Committee on Education to study the relation of the federal govern-

ment to state and local conduct of education and further action was deferred until the President's committee could report.

On February 23, 1938, the President's committee made its report, confirming on the basis of careful research, practically every conclusion reached by the Senate Committee on Education and Labor. Immediately after, Senator Elbert D. Thomas, chairman of the Committee on Education and Labor, introduced a substitute for the Harrison-Black Bill, a bill to carry out substantially the recommendations of the President's Committee. Many helpful suggestions for improving that bill have been received from leading authorities throughout the country. On the basis of these suggestions the bill will be redrafted and introduced by Senator Thomas and me in the early part of the Seventy-sixth Congress, and every effort will be made to secure its enactment.

In an address on June 30, 1938, the President said: "But we know that in many places local government unfortunately cannot adequately finance the facilities to learn. And there the federal government can properly supplement local resources." That statement is in keeping with the conclusion of his committee: "Unless the federal government participates in the financial support of the schools and related services in the less able areas, several millions of the children in the United States will continue to be largely denied the educational opportunities that should be regarded as their birthright." We should, therefore, be able to look confidently forward to the early enactment of this desirable and necessary legislation.

The New Educational Program in Italy

The following statement is quoted from a recent issue of the London *Times Educational Supplement.*

At its sitting on Wednesday night [February 15, 1939] the Fascist Grand Council approved a scheme to be known as the "School Charter" for the reform of education in Fascist Italy. The charter is intended to give a particularly Fascist stamp to the education of Italians from infancy to maturity.

There is to be close collaboration between the school and the Fascist Party, since the school, the G.I.L. (Fascist Organization for the Training of Youth), and the G.U.F. (Fascist University groups) are together to form the complete instrument of Italian education. Attendance at the instruction given in these three educational organizations is made compulsory (between the ages of four and fourteen at school and the G.I.L.; at the G.I.L. up to twenty-one even for those who do not continue at school; at the G.U.F. for all university students). All Italians will thus receive progressively a moral, cultural, military, and political training.

A new educational feature is introduced in section five, which lays down that labor in all its forms—intellectual, technical, and manual—is considered as a social duty, and part of the instruction in all schools from the elementary upwards will take the form of periods of labor, in workshops, factories, on the

land, or at sea. The Italian school is to be divided into four branches—elementary, secondary, higher, and university, each with its own subdivisions of specialized training or faculties.

The new School Charter is to be applied in the scholastic years 1939–41, and is represented as "the expression of a Totalitarian State which intends to move towards the masses and shorten the distances between the social classes." To this end, the privileges of wealth in the educational sphere are abolished, and henceforth, it is emphasized, the higher educational establishments will no longer be a privilege of the well-to-do classes, as they will be open also to the poor who show talent.

Bertrand Russell on Education for Democracy

THE following paragraphs are quoted from a recent address of Lord Russell, the distinguished English philosopher and mathematician. The address was delivered before the Department of Secondary-School Principals at its Cleveland meeting.

If democracy is to be workable, the population must be, as far as possible, free from the fiercer emotions of hatred and destructiveness and also from the emotions of fear and subservience. Now, those are emotions which are inculcated in very early childhood. A parent of average ferocity begins with his or her child by the attempt to teach him complete obedience, and makes him either a slave or a rebel, and neither a slave nor a rebel is what is wanted in a democracy. A citizen is a different sort of person from either a slave or a rebel, but you cannot get the proper emotions for a citizen out of an autocratic and rather cruel type of parent, nor, of course, out of an autocratic and cruel type of school. . . . .

I should like to see people exposed in schools to the most vehement and terrific argumentation on all sides of every question. I should like to see this organization, the Department of Secondary-School Principals, get the most eloquent advocates of every imaginable point of view to broadcast to all the schools in the country, opposing each other, putting their rival points of view. I should like the teachers then afterward to say to the children, "Well, now, you have heard what so-and-so said. I think the time has come when you should analyze his arguments, put them down on paper, and see what they come to." The children would very soon find out that the orators who had the most effect at the moment were those who had the fewest arguments when you put them on paper. If you had opposite points of view put on every kind of thing, the opposite propagandists would neutralize each other, and in the end you would get people who might be capable of listening to eloquence without being carried away by it. That is one of the most important things—to learn to be immune to eloquence. You will not be that by never hearing eloquence; you have to hear a lot. I should have all the schools listening to all the sorts of eloquence, only I should take care that it was of opposite sorts. . . . .

As I said, the advertisers led the way; they discovered the technique of producing irrational belief. What the person who cares about democracy has got to do, I think, is deliberately to construct an education designed to counteract the natural credulity and the natural incredulity of the uneducated man; because the uneducated man has these two opposite defects; he believes a statement when no reasons are given for it, and equally he disbelieves it when reasons are given. So that you have two opposite tasks; to cause people not to believe when there is no reason, and also to cause them to believe when there is reason. The credulity and the incredulity are exactly wrong in the natural man. I think if there is any [argument] for original sin, it is perhaps in this direction, in the ways in which we come to believe and to disbelieve things.

I should start very young. If I had to run an infant school, I should have two sorts of sweets, if I were the teacher—one very, very nice and the other very, very nasty. The very nasty ones should be advertised with all the skill of the most able advertisers in the world. On the other hand, the nice ones should have a coldly scientific statement, setting forth their ingredients and consequent excellence. I should let the children choose which they would have. I should, of course, vary the assortment from day to day, but after a week or two they would probably choose the ones with the coldly scientific statement. That would be one up. I should go on in the same way all through. . . . .

I should do the same in teaching history. I should take them through great controversies of the past. I should let them read the most eloquent statements in favor of positions that nobody now holds. For example, before the American Civil War, the southern orators—who were magnificent orators—made the most moving speeches in defense of slavery. If you read those speeches now, you almost begin to think it must have been a good thing. I should read them all kinds of very, very eloquent defenses of views that nobody now holds at all, such as the importance of burning witches.

When they had grown a little impervious in that way, I should give them rhetoric in the present, similar speeches in favor of current controversial opinions. I should give it to them always on opposite sides. I should read to them every day, as a sort of *bonne bouche* to their history, what is said about Spain, first by the *New York Times* and then by the *Daily Worker* so long as the Spanish question lasts, or whatever question is on. I should say, "What do you suppose has happened?" In time, perhaps, they would learn to infer the truth from these opposite statements.

The art of finding out from the newspapers what it was that happened, is a very difficult one indeed, and one that every democrat should be taught. It is very instructive to read newspaper accounts when you have been an eyewitness of an occurrence. I should try as much as possible to get pupils to have the experience of seeing first of all what did happen, and then what was said to happen by the opposite sides, and so to learn that the truth is usually about in the middle.

There is a great deal to be done in this direction if people are to be capable of

understanding how to judge a political question. I do not want to teach people one opinion or another opinion; it is not the business of education to do that. The business of education is to teach pupils to form opinions for themselves, and they need for that purpose to be rather impervious to eloquence and propaganda, to be on the lookout for the things that are intended to mislead, and to be able to pick out what really is an argument and base themselves on that. . . . .

I want to safeguard myself at this point. You cannot get any kind of improvement in the world, or any kind of good life, without a basis in the emotions. But you have to be sure that that basis is the right one. I think that the only sort of emotional basis is what I should call kindly feeling, that is to say, a wish, not only in regard to your friends and the people you know, but in regard to mankind at large, that as far as possible they should be happy, enlightened, able to live a decent sort of life. When you find other ideals, as you very often do, strongly recommended in terms that sound like lofty morality, such ideals as national greatness, the victory of this or that cause, or any kind of thing that involves the suffering, the destruction, the misery of some large group of mankind, then say, "That is not an ideal that I care for or that any democrat can care for, because it is of the essence of democracy that we think every human being counts alike."

I have said very little about the nonintellectual aspects of the matter, but I should like to end with a few words about that, because, while I have said that what I want is as far as possible something like the scientific attitude, I do want also besides that some capacity to feel what are the ends of life and what makes life important to human beings.

That is a matter for the cultural side of education. I do not think that is to be obtained merely by knowing facts. It is to be obtained in different ways by different people. Many get it from music or poetry. Some people get a great deal from astronomy. I sometimes think that, if people would reflect upon the size and antiquity of the stellar universe, they would perhaps feel that some of the controversies upon this rather insignificant planet are not so important as they seem to some of us, and perhaps that might take a little of the acerbity out of our disputes. We need negatively the realization that our disputes are not so important as they seem, and positively, through art, through music, through poetry, and so on, the feeling that there are things really valuable that human beings can enjoy and achieve, and that these are different things from the ones that come in the clash of politics, not the sort of things that happen on a battlefield, but individual things, things that happen in your own mind, important feelings, emotions, and insights. All these things are to be kept alive, things not to be sacrificed to the collective, organized life of the community. That life is necessary, it has to go on, but it is not the highest part of our life. The highest part of our life is more analogous to what the religious teachers have always spoken of. It is something more individual. I think perhaps that is the deepest quarrel I have with the people who believe in the corporate state and all the rest of it, that they seem to think that our highest life is in collective activities, and I

do not believe that at all. I think our highest life is something more personal, and that where we co-operate in large groups, although co-operation is immensely important and necessary, it is not as a rule with the very highest part of our nature, because we all of us reach our best in somewhat different things, so that where we all work together it is hardly possible that we can each of us reach quite the best that our nature is capable of.

I think all education ought to bear that in mind and ought to be very conscious of the possibility of individual excellence in the future. For that reason much the most important of all qualifications in a teacher is the feeling of spontaneous affection towards those whom he teaches, the feeling with each one of them, "This is a person with certain capacities, a person who can do certain things, who has a right to his place in the world," and not, "This is a soldier in the army," or "This is material for propaganda," or "This is one of the persons out of whom I can make a great power which can do this, that, or the other." That is not the way to use the material which you teach. The right way is one much more analogous to the religious way, which realizes that each human being has in himself certain excellencies and certain possibilities, and that the business of education is to bring those out.

Here and There among the Schools

Items selected for reporting in this issue of the *Elementary School Journal* relate to community co-operation in the use of sound films, a plan for the administration of a county unit, an educational program designed to serve all members of a community, a new health record card, an auditorium social arts program, and the development of a child-health fund.

Community co-operation in the use of sound films A comprehensive, instructional sound-film program is being introduced into the schools of Kilgore, Texas, and into the schools of a number of co-operating communities. The program, as described in a recent number of the *Instructional Sound Films Bulletin*, was initiated by W. L. Dodson, superintendent of schools and president of the junior college at Kilgore. As a result of a series of conferences of school administrators in this territory, twenty-two schools agreed to subscribe to a co-operative sound-film service to be centered in Kilgore. The general responsibility for the development of the work will be assumed by Mary Clint Irion, who will leave her position as assistant director of visual aids in Los Angeles County schools to take charge of the program.

The co-ordination of work in a county school system

Some years ago the state of West Virginia adopted the county unit of school administration. In order to give unity and direction to the work of the schools of his county, Bryan Hamilton, superintendent of schools of Randolph County, with the aid of Emily J. Wilmoth, assistant superintendent, and Henry Hamilton, director of high schools, has prepared a mimeographed bulletin entitled "A Plan for Administration of the County Unit in Randolph County." The bulletin is intended as a practical handbook and guide to the school supervisors and teachers of the county. It discusses at some length the general plan of operating the schools and contains sections on the underlying philosophy of the county school system, supervision, notes to teachers, the daily program, supplementary materials, standards and syllabi, health education, bus transportation, and textbooks. It is a type of handbook which might well be of interest to county school officials in other states. Presumably it can be secured from Superintendent Hamilton at Elkins, West Virginia.

An educational program for the whole community

Under the general direction of Glenn Kendall, superintendent of schools, an educational program is being worked out in Norris, Tennessee, which is designed to challenge the interests and serve the needs of all members of the community. The following statement descriptive of the program, prepared by Mr. Kendall, was published in a recent issue of the *Curriculum Journal*.

> Education, as accepted by the Norris educational staff and the citizens of the town, is a continuous process, extending to and serving all age groups. To that end, there is maintained an educational program, beginning with the nursery-school children at approximately two years of age, continuing through the kindergarten, the elementary school, the secondary school, and embracing a general adult-education service. Among these adult services are: a full-time library, a motion-picture program, general shop services, arts and crafts, health education, general cultural classes, recreational facilities, and in-service training, as accounting, typing, dictation, etc., for employees of the Tennessee Valley Authority.
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> The program is planned primarily to serve the citizens of the town of Norris and approximately 125 pupils from a rural area near the town. The pupils from outside the town limits come by tuition arrangement with the County Board of

Education. Services have been and are being extended into a larger area by co-operative arrangements and agreements with various agencies. An example of this type of service is one now in effect in health education. The County Board of Education, the County Health Department, the State Department of Health, and the educational program at Norris are co-operating in a joint enterprise in health education for an area of approximately one hundred square miles around Norris.

The educational philosophy which governs the program has been stated by the staff in the following tentative terms: "The aim of education in Norris is to develop healthy, intelligent citizens and happy, socially useful members of a democratic society. We believe this can be done best by having the participants share as much as possible in the planning, execution, and evaluation of their total educational program. This assumes that they will take an increasing responsibility for their work and individual development in all their educational activities and through life."

The following concrete statements have been accepted as guides in the development of the program:

1. The curriculum should be centered around basic areas of human activity. These basic areas should be outgrowths of the needs and interests of the participants. Insofar as possible, the participants should sense and express these needs and interests.

2. There should be core fields of instruction adjusted to the needs and interests of individuals rather than a definite number of separate subjects.

3. Integration, rather than specialization, in the main should be followed.

4. Commonly designated extra-curriculum activities should become a part of the regular curriculum.

5. Subject matter should be used as it applies to real life situations; not as having virtue in itself.

6. Functional values, such as appreciations, ideals, self-direction, etc., are perhaps the most important values which can be developed, and concerted effort should be made to insure their growth.

7. The curriculum should be society-centered rather than subject-centered.

8. The school should be organized throughout for laboratory procedures, using the community as much as possible for firsthand studies and experience.

9. The guidance program should be an integral part of the curriculum and of each instructor's program.

10. An intensive effort should be made to select and to develop a wide variety of printed, visual, and other objective materials for classroom use. Textbooks should be used with due regard to their limitations.

11. Evaluation of work done should be practiced by the student as well as by the teacher.

12. Marks, honor rolls, contests, and other forms of rivalry and competition should be eliminated as far as possible.

A new type of health record card in New York The school authorities of New York City are putting into operation a new system of child accounting. A new record card for scholastic achievement was recently introduced. The announcement is now made that a new type of health record card, intended to follow the child from the kindergarten until he finishes high school, will be put into use shortly.

Auditorium social arts in a junior high school A mimeographed bulletin, prepared by Edward R. Lorenz and W. H. Bateson and entitled *Auditorium Social Arts in Jefferson Junior High School, Dubuque, Iowa*, describes at some length the extensive program which the authors have worked out in their school. The objectives of the program, the methods employed, the physical setup, and the materials used are all treated in detail. The first major objective is orientation, the purpose being to familiarize the pupils with the rules and the spirit of the school, parliamentary procedure, the use of the library, the club program, and the like. The second general objective is citizenship training. In this part of the program opportunities are afforded for practice in self-government through pupils' associations, leadership, co-operation, initiative, and a sense of responsibility. The third general objective is the correlation and the motivation of classroom subjects through the use of certain supplementary materials, such as debates, round-table discussions, illustrated lectures, visual aids of all kinds, and dramatizations. The two other major objectives are guidance and the proper observance of special days commemorative of the lives of great men. Principals and teachers interested in programs of this kind will find the bulletin helpful and suggestive.

Health service for children in Fort Madison, Iowa From A. I. Tiss, superintendent of schools at Fort Madison, Iowa, we have received the following account of a plan to provide a more adequate health service for the children of the community.

The Fort Madison Public Schools, under the leadership of Zoe Mertens, school nurse, and the grade principals, have developed a comprehensive plan for taking care of indigent pupils in the local schools.

Six years ago when the depression began to interfere with the proper care of children, the teachers formed an organization to raise money for food and medical care. At first they gave 2 per cent of their salaries, but that donation is no longer necessary.

This year over four thousand dollars will be spent on health work in the schools. Heretofore immunization against diphtheria was given when the children entered school. Now each September two hundred children over nine months of age are given toxoid at a cost of one dollar each. As a result diphtheria as a scourge to childhood has been eliminated from Fort Madison. Eight hundred dollars will be spent on tonsillectomies and medical attention this year; fifteen hundred dollars on milk, lunches, and clothing; and eight hundred dollars for dental work. All children have been tested twice for hearing defects by Dr. Gardner of the University of Iowa, and as a result a lip-reading teacher has been hired.

For this work the local Red Cross organization gives annually four hundred dollars; the Rotary Club, two hundred dollars; the Board of Education, five hundred dollars; the King's Daughters and the parent-teachers' associations, two hundred dollars each. A card party and a carnival usually net a thousand dollars. Donations this year from citizens, the American Legion, the City Council and Board of Supervisors, and the grade and parochial schools will total another thousand. Each year someone who calls himself "the unhonored and unsung taxpayer" makes an anonymous contribution because he believes it to be "the best work the schools are doing." This year he will give a thousand dollars and after that two thousand dollars a year. Only the superintendent of schools knows his name.

All pupils, when they enter the junior and senior high schools, and pupils participating in physical education and athletics must pass a thorough physical examination under a physician each year. The Fort Madison Medical Society agreed to do this for two dollars for each examination. If the parents of the child are financially able to pay for the examination, they have done so; if not, the expense has been checked out of the Child-Health Fund. Approximately four hundred school children have received this service since September. Weak hearts and lungs, failing eyesight, bad tonsils, etc., have been found. Several cases have already been taken care of, and several are now being treated.

The fact that so many organizations contribute to this fund indicates that it has enthusiastic support. With few exceptions, teachers and principals believe it to be the best work they do and support it with unstinted effort and with their own money.

New Evidence on the Value of Preschool Education

A publication of the University of Iowa, entitled *A Study of Environmental Stimulation*, reports the results of a very significant investigation. Children living in an orphanage were divided into two

carefully matched groups, a preschool group and a non-preschool, or control, group. The consequences flowing from preschool attendance are little short of startling. They reveal conclusively the disastrous effects of an unfavorable environment in the early years of the child's life. The study has such an important bearing on both educational and social policy that we feel justified in quoting the conclusions at some length.

The study described in the foregoing pages set out to determine the effects of preschool education (through the medium of a preschool) introduced into the lives of underprivileged children living in an orphanage. A unique opportunity to study the effects of such education by the control-group technique with control over other variables was offered by the orphanage situation. Here both experimental and control subjects were exposed to the same environmental influences except for the hours of the day when the experimental group attended preschool. They lived in the same "cottages," ate together in a common dining-hall, slept in the same dormitory, and were under the direct care and supervision of the same orphanage staff.

The study extended over a three-year period. At its beginning . . . . the children of preschool age living in the orphanage at the time were divided into two carefully matched groups. They were equated on intelligence, chronological age, sex, length of previous residence in the orphanage, nutritional status, and presence or absence of sensory defects. As time went on new admissions to the orphanage were assigned to their respective group with an attempt to keep the two groups continually equated. Meanwhile some children already in the project were placed in foster-homes or progressed in age beyond the limits of the preschool's jurisdiction. At any one time the enrolment in preschool was approximately twenty children, sometimes more, sometimes less. . . . .

Taken all in all, the preschool exerted a profound influence upon the children during the period of preschool enrolment and probably in a number of instances changed the whole tenor of their later lives. Some of the children were made placeable in foster-homes who almost certainly otherwise would have been doomed to commitment to an institution for the feeble-minded or at best would have continued to reside in the orphanage. To the reader who has not perused the chapters of research results these statements may seem unbelievably extreme. The statements, however, have arisen out of the results of the study and not from preconceived ideas at the outset. Not one of the authors anticipated the extreme effects produced by an unfavorable environment. Rather the bias was one, on the basis of past experience with children from superior homes, of expecting gains in the preschool group which would not be duplicated in the control group. . . . .

From the chapter on intelligence it will be seen that the contribution of the preschool to intellectual growth was largely that of counteracting losses toward

which the extra-preschool environment was constantly pulling. There was no especial difference in pattern of growth over a period of approximately four months. Subsequently the preschool and control groups began to diverge, and the divergence became accentuated as time went on. The effect of long residence for the control group was that of tending to bring all children, regardless of initial intelligence classification, to high-grade feeble-mindedness or borderline classification. The greatest decreases, therefore, arose for children originally of average intelligence who became feeble-minded. Several children from the control group were at the close of the project transferred to an institution for the feeble-minded. The trend for the preschool children was toward normality in intelligence. Those who were initially average remained average, and the lower levels were moving upward, resulting in a small mean gain for the total group.

Although not enough time has elapsed since the project ended to permit follow-up studies of the permanence of effects of preschool education, the results on the few children who could be so studied confirm the beneficial effects of preschool attendance upon later intellectual development and school progress. The preschool children who were placed in foster-homes made better subsequent intellectual growth than the control children who were placed. Those who remained in the orphanage excelled the control children in grade placement and scholarship. . . . .

Marked differences between preschool and control children were found in respect to social maturity (social competence). From a very early date in the project, the preschool children functioned at approximately a normal level, as judged by the standardization norms, while the control children functioned at a level about one year below the preschool group. This difference was in line with expectancy, since in the early part of the project there was concentration of teaching efforts upon routine habits. Following the initial separation, the general tendency was for some loss in social quotient in both groups as time went on. It seems probable that the loss by the preschool group may have been due to lessened emphasis on routines and greater concentration of effort elsewhere. Of significance is the finding that within each group the loss or gain of particular children showed a strong tendency to vary according to their position in the group. There was a general tendency to move towards the mean of the group. Yet this process took place from two entirely different absolute levels of the preschool and control groups.

Within the preschool group certain changes in social adjustment and social behavior were evident during the course of the project. Most of the changes seemed to indicate improved adjustment to the social situation and the school, increased emotional control, happier contacts with other individuals, more purposive activity, and a trend away from the extremes of social behavior.

Taken as a whole, the results of the study have a bearing on the concept of maturation, if this is thought of as primarily a physiological process little influenced by training. Such a concept does not appear tenable in the light of results obtained here. Not one of the areas studied supports such a concept.

Maturation appears rather to be an unfolding, adjusted in tempo and in nature to the demands or opportunities of the situation.

Similarly, in the light of the major shifts in ability and characteristics in almost every area studied, one is given pause on the problem of inheritance of abilities. The limits set by heredity within which changes can take place are assuredly wide. The present study did not begin to tap the limits, since optimum conditions for child development were far from being realized; probably minimum conditions were more closely approximated. The entire study serves rather to give only a hint of the range of responsiveness of the organism to its environment.

A Helpful Guide in the Administration of Pupil Transportation

In rural areas the transportation of pupils to and from school is an increasingly important aspect of school administration. The bus-driver, a newcomer among school employees, has important work to do, and much depends on the efficiency with which he does it. His first responsibility, of course, is the safety of the children committed to his care. This responsibility involves something more than the avoidance of accidents; it involves attention to the comfort and the health of pupils. In a very real sense the bus-driver is also a teacher. For at least part of the day pupils are under his control, and his influence may be demoralizing or it may contribute much to the development of good citizenship. Moreover, the bus-driver is in a position to know a great deal about what is going on in the school. He hears much, and he may or may not talk much. If he is a person of some importance in the community, as he usually is, he has it in his power to influence public opinion with respect to the school.

School administrators as well as bus-drivers should find particularly helpful a pamphlet recently published by Professor Ward G. Reeder, of Ohio State University. It bears the title *A Manual for the School Bus Driver*. Among the topics treated are the following: "Qualifications of the Driver," "Certification and Selection of the Driver," "Training of the Driver," "Operating Rules for the Driver," "Transportation Rules for Pupils," and "Liability for Accidents, and Transportation Insurance." The following paragraphs dealing with the bus-driver's liability for accidents are of such pertinence that they warrant quotation.

Although the decisions of the courts have frequently disagreed on the matter, most of them have not held school employees liable for accidents. When negligence of school employees has been proved, the courts have sometimes held against them—much more often than they have held against the board of education. The question of liability is, therefore, determined by the decisions of judges and juries.

Often the decisions of the courts have been determined by whether the persons being sued were school employees, or whether they were contractors. Concerning school bus drivers the courts have not clearly determined the conditions under which the employee relation exists and the conditions under which the contractual relation exists. As a rule, ownership of the school bus by the driver makes him a contractor and therefore liable for any accidents which may be due to his negligence. Transportation contracts frequently contain a clause which gives the board of education the right to terminate the contract whenever the services of the driver are considered unsatisfactory or "as the best interests of the school may require"; according to a California court decision, such a clause changes the relationship of the driver to the board of education, making him an employee and not a contractor (*Smith* v. *Fall River Joint Union High School District*, 118 Calif. App. 673, 5 Pac. [2d] 1930).

When the bus-driver can be shown to be a real contractor, the courts have usually decided that he is liable for damages in case of an injury for which he was partly or wholly responsible. They have held that an individual may not contract against his negligence, and that although the contractor may be an agent of a body immune to damages that fact does not make the agent immune. In Florida, for example, the Supreme Court held a driver liable for damages because he failed to repair a defective window guard, thus permitting a pupil to be injured; the decision of the court in this case is quoted herewith (*Burnett* v. *Allen*, 154 So. 515):

"As the contract contemplated the transportation of children who are incompetent to be charged with the assumptions of risks, because of their tender years and inexperience, it is likewise contemplated and, by implication at least, binds the person contracting to furnish the means of transportation to use every reasonable precaution and care for the safety of such children and to prevent any harm or damage coming to them, either when approaching the bus, while riding in the bus, or when alighting from and leaving the immediate proximity of the bus, at the completion of the journey, or during any part of the journey. Whether a person so contracting has used all such reasonable care and caution is a question for the jury in each case."

On the other hand, the bus-driver can feel safe from the award of damages when he has exercised due care in performing his duties. In support of this rule the case of Lewis against Halbert in the Texas Civil Appeals Court, December 15, 1935, is cited. In that case the driver had contracted to "use every care and precaution in the way of protecting the children being transported." However, while being transported a pupil fell from, and was run over and killed by, the

bus; thereupon his parents brought suit against the driver, claiming that his negligence led to the fatal injury. The court denied any damages on the ground that the driver had exercised due caution and that the accident was not due to the driver's negligence.

The pamphlet may be secured from the Educators' Press, 50 East Broad Street, Columbus, Ohio. The price is fifty cents.

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ARITHMETIC AS A CONTRIBUTION TO A LIBERAL EDUCATION

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*

FIVE or six persons devoted to education and hence possessed of more than average intelligence are having luncheon. Each has ordered a different meal; each is expecting to settle his own account. The waiter, however, disregarding the request for separate checks, has brought in but one bill and has placed it before the most prosperous-looking person in the group. You have doubtless participated in such a luncheon. If you have, you appreciate the comedy which ensues as these table companions try to break down the total into the proper amount for each person and assess the tip which each should pay. Everybody talks, nobody thinks, and nobody has the right change.

Consider this problem: ". . . . radium is worth $25,000 a gram, with the present United States supply only 300 grams."[1] What is the value of the supply in the United States? Is your answer $750,000, $75,000,000, or $7,500,000?

Educators who have worked with graduate students know how furiously they will figure and how little their figures mean to them. These students represent the best product of our school system, yet they are often surprisingly lacking in number sense. They can count, but they cannot think. The evidence is all too impressive that the teaching and the learning of arithmetic in the public schools have failed dismally to secure a widespread intelligence in the use of number.

The school's task, in respect to arithmetic, is too exclusively understood to be the manipulation of symbols, called "computing." The school's task is, in reality, far more fundamental. It is nothing less than an attack on arithmetical illiteracy. There is an illiteracy in dealing with ideas expressed by numbers just as there is an illit-

[1]Robert B. Taft, "Radium Hounds," *Scientific American*, CLX (January, 1939), 8.

eracy in dealing with ideas expressed by words. In each case competence, or literacy, is something more than the manipulation of symbols. It is an appreciation of the meaning attached to the symbols and an ability to apply the symbols in order to facilitate thought.

Everybody is acquainted with persons who, although they may or may not have much formal schooling, possess to a high degree arithmetical competence. An arithmetically literate man will note and use, without comment and without delay, the average size of 2,668,514 farms whose total area is given as 48,504,612 acres. He senses and reacts appropriately to the implied percentage that Sudeten Germans, numbering 3.5 millions, are of a total population of 15 millions. Knowing that a meter is 39.37 inches, he does not fail to place the decimal point correctly in case he needs the equivalent of a millimeter. If the vote in a given state for his presidential candidate is reported as 564,709 against 275,418 for the next candidate, he instantly enriches the statement by the thought, "Beat him by 300,000," or "Licked him two to one." He possesses, moreover, a great deal of numerical tradition or lore, items which should be matters of common knowledge because such knowledge adds to a person's understanding of the world and of the people in it. A pound sterling is about five dollars, and a French franc is about three cents. Letter paper is eight and a half by eleven inches. Filing cards come in the sizes three and a half by five, four by six, and five by nine inches. Eighteen miles to the gallon of gasoline is good going. A property tax of twenty-five dollars a thousand on full valuation is high. Six per cent on money lent is no longer to be generally expected. A driving speed of more than fifty miles is dangerous.

Life in modern society is full of norms and standards. We are accustomed to suppose that measures of type and variation, such as averages and standard deviations, are only to be had through statistical manipulation. As a matter of fact, the experience of modern life provides us all with quantitative notions of type and variation. Unconsciously our experience puts meaning into the phenomena about us in much the same way that the statistician puts meaning into his observations through conscious manipulation of their measures.

That is not all. In ordinary social intercourse there is need of number. You can engage in no serious conversation without the necessity for understanding numerical relations. Getting the idea depends on following the thought of the speaker, and you cannot follow if you do not know where you are numerically. You do not even know when to agree, when to keep still, when to protest, or when to say "Oh, my!" You may not even be in the right decimal place. You may be thinking in thousands when you ought to be thinking in hundreds. This brings me to a topic which I think is exceedingly important.

One of the great words in arithmetic is "approximation." In life most numerical results are not exact. Measuring is always subject to error; so much so that a by no means unimportant topic in arithmetic for a liberal education should deal with the size, the importance, and the significance of error. In handling numbers, one should seek the degree of accuracy which will serve one's purpose; anything beyond that is a waste of effort.

There is another reason for intelligent approximation. When you hear an argument or read an exposition involving quantitative statements, you cannot follow the speaker or writer unless you can interpret his numbers. To be able to interpret, you must apprehend the numbers quickly and easily. It is hopeless, however, and unnecessay to attend to all the digits. In the case of large whole numbers, you will find it sufficient to deal with a few of the left-hand symbols. The rest you will disregard; this is the same as saying that you will treat them as zeros. In the case of decimals, you will attend to one or two significant figures only, and, again, these will be on the left. Here is a place for the practical numerical judgment which the arithmetically literate person knows how to exercise.

This kind of judgment does not arise through drill in computing. It can only be learned through the practice of judgment under defined conditions. Such practice may be provided in school through floor talks, committee reports, and the systematic use of reading matter which involves numbers and quantitative data.

The point I am making is that, in following a speaker or in reading printed matter, you approximate by using a few left-hand figures. If you are skilful, you exercise critical judgment as you approxi-

mate. Moreover, if you compute as you go along, you do so, not from the right, as you were taught in school, but from the left.

A great deal of experience is needed—experience of a kind seldom furnished in an arithmetic class—before one can read or hear quantitative data with ease and enjoyment. There is no surer way to kill a speech than to put figures into it, not because the figures are unimportant (they may well be the most important part of the message), but because a large part of the audience lacks that portion of a liberal education which arithmetic, rightly learned, can confer.

I like to think that the restless gropings of educational thinkers during the past twenty-five years have finally emerged into a conception of arithmetic which is no longer satisfied with the speed-and-accuracy formula of the second and the third decades of the present century. Speed and accuracy are partly by-products—by-products of an ability to see and to appreciate number in life about us, an ability to think in quantitative terms, an ability to act intelligently under the guidance of number. The possession of this ability I regard as a unique item in a liberal education. What I am saying, therefore, is that arithmetic is a contribution to a liberal education.

This conception of arithmetic is making over the whole subject. Furthermore, it is giving arithmetic an importance never before possessed by that subject. Arithmetic is no longer a bag of tricks, no longer something to puzzle little children. It takes on somewhat of the dignity that arithmetic had as an honored subject in the curriculum of ancient Greece, although it is, at the same time, quite different from, and superior to, the subject matter to which the Greeks applied the term *arithmetike*.

The arithmetic which I regard as contributory to a liberal education begins early in the course of study and lasts a long time. It is a proper field of teaching and learning for the first-grade child, and it might well receive greater attention than is now being devoted to it in the junior and senior high schools. To my mind, those who have participated in what I have elsewhere called "a flight from arithmetic" have done so because they have conceived arithmetic too narrowly. If the task of arithmetic is merely to develop computers in the sense of manipulators of symbols, where rule of thumb is the

only guide and where drill is the only method, then a flight from arithmetic is justified, and those who say, in substance, "This is a dreary subject and a difficult one. Let's postpone it until the third, the fifth, or the seventh grade"—I say, these people are quite logical in their conclusions. The trouble is not with their logic but with their premises. Their assumptions are wrong. Change these assumptions, give to arithmetic the dignity and the importance not only of a major contributor, but of a unique contributor, to a liberal education, and a flight from arithmetic is no longer possible. Thought and action take an entirely different direction. The sterile discussions which have long characterized the literature of arithmetic, mere changes of method to an unchanging end, become trivial. Larger purposes bring more penetrating analysis of means to higher ends. We are driven back to a deeper consideration of our postulates.

Number is man-made. Although it is used everywhere in the world, it has no material existence anywhere. Only as man has manipulated things having extension and plurality, has he developed number ideas. When it is realized that number has risen in the mind of man as he has manipulated things to serve his needs, the notion of the way to proceed in school is fundamentally different from the notion that prevails when the prime object of arithmetic is held to be the manipulation of symbols with speed and accuracy. The essential thing is to give the child experience out of which he may build number ideas for himself; for nothing is surer than that number ideas, to be vivid, flexible, and versatile, must arise from firsthand experience.

Obviously, giving this experience takes time. Therefore, if arithmetic is to serve its best purpose, it must begin early. I have no patience with those who would defer the right kind of arithmetic to the middle grades. Concrete arithmetic should begin as early as any educative experience begins.

Arithmetic so viewed is essentially a social study. It is a social study because it is the only area of learning available to all the people for the establishing of order, of system, of accuracy, and of punctuality. Amid all the diversity of languages, the one language common to civilized men everywhere is the language of arithmetic.

I hardly need to say that number is explicit and implicit in all

the affairs of life. As we pass in these days from an economic era of laissez faire to one of scientific and political control, it is clear that our citizenry must, as never before, acquire a new sense of mathematical power, insight, and confidence. Too often in the past it has been said, "Let the experts do our figuring," or "Let the calculating machines add and subtract for us." The world is full of tragic human wreckage because folks let someone else do their figuring. The sharper and the mountebank, the swindler and the confidence man are good at figures.

Arithmetic is a social study for another reason. It has a remarkable history. The evolution of the number system is an illuminating chapter in social progress. For thousands of years within the period of recorded history—and for nobody knows how long before—man was obliged to do his computing by means of an instrument. He used stones, knotted strings, sticks with notches in them, and finally a form of abacus; but nowhere, until the Hindu-Arabic system came into use, with its zero as a place-holder, did anyone have a notion of performing operations with the number symbols themselves. Thus it came about that our form of notation, unlike the notations which were supplanted, actually expressed number in a way to assist thinking.

Moreover, this notation has been a powerful contributor to the development of mathematics. Not long after the Hindu-Arabic system became generally known in Europe, that remarkable development of the system to the right of units' place, which we call decimals, was invented. Then came a further development, also due to the peculiar place system which we enjoy, namely, the development of logarithms, the idea that any number may be represented as a power of 10. Without these direct developments of our system of notation, mechanics and astronomy would be crippled; physics, navigation, and surveying would advance with difficulty.

Again, our system of notation has contributed enormously to the management of modern affairs. It is difficult to see how our large enterprises, requiring complicated systems of records and accounts, could be carried on without the brevity and the portability of numerical data which our notation permits. The heavy demands of modern business on computation of all kinds are generally recog-

nized. The clumsy systems which preceded the Hindu-Arabic system would be utterly incapable of meeting these demands. Much scientific work, depending as it does on the massing of numerically expressed observations, would likewise be handicapped.

If our system of notation is as important as all this, it is clear that the school curriculum in arithmetic should take due account of this fact. I venture to say that it is not doing so. Not only a new chapter in arithmetic, but a new point of view throughout the entire range of the subject, would be justified by the significance of the number system as a system. If a child knows the number system well, he will never have to learn as an abstract rule the fact that three-fourths of a number is three times as much as one-fourth of it, nor the fact that dividing by one-third is numerically the same as multiplying by three, nor the further fact that dividing by two-thirds will be half as much as dividing by one-third. He will not misplace the decimal point in dividing because his lively sense of the meaning of numbers will make any but the correct location of the point an absurdity. He will be able to estimate in advance the approximate size of his results, and he will thus be furnished with a critical instrument to apply to his results after he has obtained them.

There is a broader sense in which arithmetic can make a contribution through the fact that it is a system rather than a series of unrelated items. All its parts hang together. If a liberalizing result is to be secured from the study of arithmetic, it must be learned as a system. Dewey says that "training by isolated exercises leaves no deposit, leads nowhere; and even the technical skill acquired has little radiating power, or transferable value."[1]

These are magic words: "radiating power," "transferable value." When arithmetic is taught with such power and such value, the result is what I am calling "a contribution to a liberal education."

[1]John Dewey, *How We Think*, p. 191. Boston: D. C. Heath & Co., 1910.

DO SPELLING-BOOKS TEACH SPELLING?

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PURPOSE AND PROCEDURE OF THE INVESTIGATION

CHILDREN do learn to spell. Can teachers claim, however, that this learning is a result of their teaching? The schools have in the past generally made that claim. Is it well founded? As a means of investigating this situation, a simple but thorough experiment was tried out in the schools of Staunton, Illinois. The results were rather surprising and should cause educators to re-evaluate all the work in spelling, especially that which follows day by day the present standard textbooks in spelling.

The pupils of the Staunton schools for three and a half years used a standard series of workbook spellers which were made by specialists in the field and which are widely known and used throughout the country. The day-by-day directions of these spellers were carefully followed. From all appearances, the teachers were doing the correct thing in the correct way and were securing typically good results. Certain indications, however, caused the superintendent to wonder exactly what function the textbook was serving in the children's learning of spelling. He therefore devised a testing program to secure evidence on this point.

For testing purposes a spelling list was made up of seventy words from each book from Grade II to Grade VII and eighty words from Book VIII, a total of five hundred words. These were chosen at random and represented one word out of each 7.63 words in the entire spelling program. From these five hundred words, ten tests of fifty words were made, each test consisting of seven words from each of Grades II–VII, inclusive, and eight words from Grade VIII. The tests provided for pronunciation of each word, use in a sentence, and

a final pronunciation. The tests were mimeographed. All tests, with directions for administering and scoring, were assembled in booklet form, and a copy of the booklet was placed in the hands of every teacher. Each Friday the same list was given in the same manner by all teachers in all grades. This testing was done for ten consecutive Fridays, starting five weeks before February 1, 1938, and ending five weeks after that date.

Each teacher understood that the purpose of the tests was to evaluate the whole spelling program, not to ascertain the effectiveness of the individual teacher's work. There were no intimations at the time, and there have been no indications since, that any teacher did not do his best to secure an impartial score for his room.

The results for each class were recorded on a report form. For each test the forms provided fifty consecutively numbered spaces after each child's name. The teacher indicated in the proper space whether the child spelled correctly the word corresponding to each number. Thus, if a particular child misspelled words numbered 20, 35, and 45, marks were placed in the spaces which were so numbered. The records, therefore, showed how each child from Grade II to Grade VIII spelled each of the five hundred words selected from the spelling books for Grade II to Grade VIII. They also showed whether the child had already encountered that word in his spelling lesson. From these data the conclusions of this study were made.

GRADE RESULTS

Grade results were first computed. Computations were made of (1) the average percentage of correct spellings by each grade of the words that they had studied in their books during the twelve calendar months prior to the date of the test, (2) the average percentage of correct spellings of the words studied previous to the past twelve months, and (3) the average percentage of correct spellings of the words not yet studied. These grade results are shown in Table 1.

By reading the table horizontally, one may secure information concerning the ability of each grade to spell the words in each of the groups designated at the top of the columns. To examine the scores made throughout the grades on any specified word group, the table should be read vertically. For instance, the percentages of correct

spellings of words in the fifth-grade group were 9.5 for the second-grade pupils, 36.9 per cent for the third-grade pupils, and so on.

The scores underlined diagonally across the table are those earned on the word group which each grade had studied during the twelve months just before the dates of testing. These scores range from about 60 per cent to 90 per cent, most of them being near 80 per cent. These percentages seem to indicate satisfactory learning, as a grade average, resulting from routine teaching. It must be remembered

TABLE 1

AVERAGE SCORES OF EACH GRADE ON WORDS TAUGHT TO EACH OF GRADES II–VIII

GRADE TESTED	PERCENTAGE OF CORRECT SPELLINGS OF WORDS TAUGHT IN GRADE								
	II	III	IV	V	VI	VII	VIII	Not Taught	Total
II	58.6	22.9	11.8	9.5	7.0	4.8	3.5	2.6	13.5
III	79.7	71.8	41.4	36.9	24.0	18.4	14.4	10.5	36.6
IV	86.1	79.6	77.4	56.8	43.8	32.3	28.3	23.1	53.6
V	86.8	83.7	75.5	75.8	58.4	47.9	37.8	39.9	63.2
VI	96.5	95.1	90.5	89.1	90.0	71.2	63.1	65.5	82.9
VII	94.6	93.6	85.6	84.5	83.9	80.2	64.2	67.1	81.8
VIII	98.1	97.4	93.2	91.9	90.6	87.1	85.2	82.3	90.8

that these words were not merely those taught during the current week. They were taken from all the words taught in the twelve calendar months prior to testing. For this reason the average seems high.

When one looks at the scores above those which are underlined, a different conclusion is suggested. These scores show the percentages of correct spellings of words *before the children had studied the words*. Sometimes these scores are very close to the scores made after study; for instance, the sixth-grade children, without study, made a score of 71.2 per cent on the seventh-grade words, while the seventh-grade pupils, after study, made a score of 80.2 per cent on these same words. The scores above the lines indicate that in some cases, two years before they had studied the words, children did more than

half as well as the children who had just studied the words. In short, these figures indicate that an astonishing amount of learning of spelling takes place without any formal study and takes place years before the words are supposed, by the authors of this typical spelling textbook, to become appropriate for learning.

It is also interesting to look at the figures *below* the lines. These show that in most cases the children kept on learning how to spell these words year after year, after the teaching of the words had ceased. For instance, the second-grade pupils made a score of only 58.6 per cent on the second-grade words, but learning of these same words had kept on year after year without teaching until the eighth-grade pupils made a score of 98.1 per cent. Here again there was learning of spelling without teaching.

Finally, there was a group of words which in Table 1 is designated "Not Taught." These were words which are assigned to the latter half of Grade VIII and which had not been taught at all up to the time of testing, because the testing came in the middle of the year. Each grade spelled some of these words correctly, and the eighth-grade pupils made a score of 82.3 per cent.

This table conclusively shows that most of the learning of spelling in the Staunton schools was done either before the year in which the words were taught or after the year in which they were taught. It has been pointed out that grade scores on words taught ranged from 60 per cent to 90 per cent and that these percentages would ordinarily be considered satisfactory results of teaching. If, however, the score *after* teaching is subtracted from the score *before* teaching, Table 1 shows a very small gain from the daily grind of spelling lessons.

RESULTS SHOWN BY ANALYSIS OF INDIVIDUAL SCORES

The figures in Table 1 are misleading because they are averages. For instance, the table shows that in Grade II the average percentage of correct spellings on the second-grade list was 58.6. The individual results show, however, that the lower end of the grade spelled hardly any of these words correctly, whereas the upper end of the class spelled nearly all of them correctly. Every figure in Table 1 must be interpreted in a similar way. Table 1 gives the

grade averages, but the scores of individual children range all the way from almost zero to almost 100 per cent. In every grade there was a wide range.

The range within each grade is of special importance with respect to the learning of spelling before teaching. Characteristically, the upper end of the class spelled words far beyond their grade, and the lower end did not learn words until the words were taught. Table 2 shows the spelling achievement of the second-grade pupils divided into ten groups according to their total scores.

TABLE 2

SPELLING ACHIEVEMENT OF SECOND-GRADE PUPILS DIVIDED INTO TEN GROUPS ACCORDING TO SCORE ON TOTAL TEST*

SCORE ON TOTAL TEST	PERCENTAGE OF CORRECT SPELLINGS OF WORDS TAUGHT IN GRADE							
	II	III	IV	V	VI	VII	VIII	Not Taught
91–100	92	66	58	47	28	26	16	13
81– 90	85	50	26	21	13	9	8	5
71– 80	75	35	18	14	10	6	5	3
61– 70	70	26	12	10	7	5	2	2
51– 60	65	20	8	4	5	3	1	1
41– 50	57	15	6	2	5	2	0	0
31– 40	46	11	4	2	3	1	0	0
21– 30	36	8	2	1	2	0	0	0
11– 20	28	3	0	0	1	0	0	0
0– 10	11	1	0	0	0	0	0	0

* The figures across the table show that, for pupils in the highest tenth of Grade II, the average percentage of correct spellings of second-grade words was 92; of third-grade words, 66; of fourth-grade words, 58; and so on.

For the uppermost tenth of Grade II, the average percentage of correct spellings of second-grade words was 92; of third-grade words, 66; and so on, to 16 for eighth-grade words. For the next lower group the average percentage of correct spellings of second-grade words was 85; of third-grade words, 50; and so on, to 8 for eighth-grade words. Each lower group did less well until for the lowest group the average percentage of correct spellings of second-grade words was only 11; of third-grade words, 1; and of words above the third-grade level, 0. The average figures for Grade II given in Table 1 are correct only for the spelling of the center groups of the grade. They are not correct for the greatest number of children, who are shown by Table

2 to have done either distinctly better or distinctly worse than the center groups. This important fact holds for all grades, though space permits a detailed analysis of Grade II only.

The statement, suggested in the last section, that spelling is learned without being taught is now seen to be incorrect. It is more correct to say that spelling is learned by some children without teaching but by others only after teaching, even if then. It seems suggested, therefore, that classes should be divided and that certain children should be excused from spelling. Obviously many children are suffering a tremendous loss of time in sitting through spelling lessons that they do not need.

RESULTS ON DIFFERENT WORDS

It has been pointed out that children differ in spelling ability, and it must now be emphasized that words also differ in spelling difficulty. It has been suggested that some children learn spelling without being taught but that other children need much teaching. The results of this experiment also suggest that certain words do not need to be taught whereas others do need real teaching.

As explained above, this study yielded the record of each child on every word of the five hundred included in the experiment. From these records it was possible to tell what happened to each word in each grade. Table 3 gives the results on ten typical words for Grade V. The second column shows the percentage of fourth-grade children who spelled these words correctly before they were taught. It will be noticed that the word "address" was spelled correctly by 83 per cent of these children who had not yet studied it, whereas "certain" was spelled correctly by only 2 per cent before studying. The other words range between these extremes. On the basis of learning without study, these ten words vary greatly, and the same is true for all the five hundred words tested.

The last two columns show what happened to the words after they were taught. Here the results are shown in terms of learning by the highest quarter of the grade and the lowest quarter of the grade. Satisfactory learning was assumed to be 90 per cent, since this score happened to be the passing mark in spelling in the local system. The two last columns, therefore, show at what grade level these words

were actually spelled correctly by 90 per cent of the highest and the lowest quarters of the grade. Here the results also show great difference in difficulty between words. Two words ("bones" and "boots") were known by the good spellers as early as Grade III but were not known to the poor spellers until Grade VI. Five of the

TABLE 3

SPELLING ACHIEVEMENT ON TEN FIFTH-GRADE WORDS BY FOURTH-GRADE PUPILS BEFORE STUDYING THE WORDS AND BY HIGHEST AND LOWEST QUARTERS OF PUPILS DIVIDED ACCORDING TO SCORE ON TOTAL TEST *

WORD	PERCENTAGE OF PUPILS IN GRADE IV KNOWING WORD IN YEAR PRIOR TO TEACHING	GRADE AT WHICH ABILITY TO SPELL WORD WAS ATTAINED BY 90 PER CENT OF—	
		Highest Quarter of the Grade	Lowest Quarter of the Grade
address	83	IV	.....
aim	37	V	VI
appeared	25	V	.....
bones	71	III	VI
boots	77	III	VI
breath	67	IV	VI
certain	2	V	.....
chief	41	V	VIII
cities	27	V	VI
contest	70	IV	.....

*"Address," a word taught in Grade V, was spelled correctly by 83 per cent of the children in Grade IV. The word was spelled correctly by 90 per cent of the highest quarter of Grade IV, but it was not spelled correctly by 90 per cent of the lowest quarter of the pupils in any grade.

words were not known even by the good spellers until the words were taught in Grade V, and two of these ("appeared" and "certain") never became known to the poor spellers, even in Grade VIII. Half of the words had to be taught to the good spellers, or were learned by them in Grade V, where the words were taught; and half of the words did not need to be taught to these good spellers because they knew the words before reaching Grade V. The last column shows that all ten of these words needed to be taught to the poor spellers and that, even then, the teaching did not cause them to reach 90 per cent in Grade V.

CONCLUSIONS

The figures from this testing program seem to say three things: (1) Most of the learning of spelling seems to be done before the year of teaching or after that year. (2) The good spellers do most of the learning without teaching, while the poor spellers apparently need the teaching and even more teaching than is given them. (3) Certain easy words, rather than all words, are learned without teaching by the good spellers. Hard words are not even learned through teaching by poor spellers, many of these words never being learned at all by this group.

If these data represent fairly the results from a conscientious use of a workbook speller throughout the grades during a period of years, what practical conclusions may be drawn by the school superintendent? This question cannot be answered by citing experiences of other cities with other teachers, other methods, and other sets of conditions; the teachers of Staunton, with their superintendent, need to work out a plan which suits best their situation. What schemes, then, should they try? Three lines of study seem suggested by this experiment.

First, work might be done with the word list. In this system, apparently, some of the words need not be taught but are satisfactorily learned without teaching. Other words seem not to be learned sufficiently well under the present teaching and need to be included in a review system. The textbook now being used does not contain a system of review of hard words. A revision of the word list would, therefore, include omission of words, change of grade placement of words, review of words, and addition of words suggested by school subjects and local situations.

A second line of work might deal with the pupils. It might include excusing certain pupils from spelling lessons after they had passed proficiency tests. These tests would be intended to show which pupils have the ability to learn spelling by themselves. These pupils would have to pass spelling-ability tests at regular intervals throughout the year to show that they continue to make use of their ability.

Third, various plans might be followed in which efforts are made to allow both for differences in children and for differences in words. In the test-study method this end is sought. The object of the first

test is to find out which children know which words, and the assumption is that each child then has his own list to study. This method could be tried with the same books which the system is now using. In the test-study method, however, the assumption is that, when a word is unknown to a child on the pretest, the child must study that word. The data presented in this article seem to indicate that, if the child is bright, he will probably learn the word later without study. Another method of adjusting both to pupil and to words is for each child to keep a spelling notebook in which he develops his own list. This method is pursued by teachers everywhere as the best application of the principle of learning on a basis of need, but it entails an amount of attention from which most teachers shrink.

The question, "Do spelling-books teach spelling?" does not seem to have a simple answer. At least this investigation points out that it is not entirely satisfactory merely to buy a good spelling-book and carefully to follow its directions. Much still needs to be determined before a particular faculty knows just what the school should do about spelling. One solution is the adoption of a thorough language-arts program. Such a program gives attention to words primarily as tools of thought and expression, but it brings in, at appropriate points, attention to word forms and to ways of learning word forms and thus encourages the continual, natural learning of spelling.

SIMPLIFIED PHONICS

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READING is the only one of the three R's that still retains the prestige which it once had in the schools. The typewriter has supplanted the penman; the adding machine and the calculator are taking the place of the expert in figuring; but so far there is no machine for reading and interpreting the printed page (3).

The times, with the enormous amount of available reading material and the increasing need for wide reading, demand that the child read with fluency and comprehension. To read fluently and comprehendingly, he must recognize words with ease and facility, and it therefore becomes an essential duty of the school to provide the child with effective methods of recognizing words.

Gates lists the following methods of studying and recognizing words: "(1) dependence upon striking characters, (2) dependence upon the general configuration, (3) use of letters, the spelling method, (4) phonetic analysis, (5) syllabification, (6) visual analysis of words, (7) dependence upon context, (8) versatility of attack" (17: 235).

Phonic analysis, the method of teaching word recognition which is the favorite in American schools, has been praised and blamed, but the general opinion still is that it has a recognized place in the reading program. Gates says: "The great mistake in American teaching has been the assumption that phonetic skill was all important and sufficient, that the other types of training could be neglected, and that the more phonetic experience the pupil got the better" (17: 238).

In the literature on the teaching of phonics, pro and con, the following advantages are claimed: training in phonics makes for independence in the recognition and the pronunciation of words; it is an aid in spelling; and it furnishes pupils with a method of

attack on new words. The objections are: overemphasis on phonics may result in slow, stammering reading, poor comprehension, and a slower rate of progress in the primary grades; and it may make children so word-conscious that they lose interest in meaning. The traditional methods of teaching phonics do not provide for versatility in the use of two or more methods of recognizing words. In brief, the feeling is that a reasonable amount of phonics, correctly taught, is desirable. Dolch says:

> In times past, the abuses in the teaching of phonics have called for sharp criticism and evaluation. It seems that the time has now come for constructive studies and for answers to the questions: (1) What phonics should be taught? (2) When should such phonics be taught? and (3) How should such phonics be taught? [9: 120.]

These same issues are raised in a Research Bulletin of the National Education Association (1).

WHEN SHOULD PHONICS BE TAUGHT?

There is a decided tendency to prolong the period of preliminary preparation and to postpone the teaching of phonics until the child has learned to notice similarities and differences in words and has acquired a sight vocabulary of from sixty to a hundred words or more. Dolch and Bloomster say:

> The general agreement is that it [phonic attack] must follow some certain amount of sight recognition. . . . .
>
> To learn phonic analysis of words and to use the results of such analysis surely requires more mental ability than that used in sight recognition or, at least, a different type of mental ability. . . . .
>
> Phonic readiness comes at some time later than sight readiness [10: 201–2].

These two investigators found in their experiment that children of high mental ages sometimes fail to acquire phonic ability but that children of low mental ability are certain to fail. Children with mental ages below seven years made only chance scores. As far as this experiment indicates, a mental age of seven years seems to be the lowest at which a child can be expected to use phonics, even in simple situations. The study suggests that the schools are perhaps expecting results from phonics-teaching far too soon. Davidson (5) found that, until children attain a mental age of at least seven and a half years, they have difficulty in distinguishing the letters *b*, *d*, *p*,

and *q*. In the light of these findings it is probable that only the simple consonant sounds should be taught in Grade I.

HOW SHOULD PHONICS BE TAUGHT?

Recent literature on phonics warns of the danger of overemphasizing phonics and the teaching verbatim of a great number of phonograms. There is a tendency to bring phonic work into closer relation with the reading program and to limit drill to the child's discovery of the knack of recognizing and blending sounds and phonograms into words (**1, 18**).

Dickson (**6**) found that the analytic-synthetic method is preferred. The majority of authorities make a division between the initial consonant and the final phonogram as "c-at." Gates says: "Especially avoid the attempted sounding of small phonetic units that cannot be sounded correctly except in combination" (**17**: 317–18). Stone says: "After the child has acquired adequate phonetic knowledge he should be trained to focus upon the initial letter or letters, getting in mind the initial sound (or motor equivalent); then to look forward to see the remaining part of the word; then to return the eyes to the beginning of the word and say the word as a whole" (**24**: 404–5).

WHAT PHONICS SHOULD BE TAUGHT?

The question of subject matter is perhaps not so easily answered. While there is no close agreement concerning the phonetic elements which should be taught, there is a distinct tendency to emphasize those phonograms appearing frequently in the most commonly used words (**6, 9**). It is encouraging to note Gates's caution to "teach no more specific phonograms than may be necessary to give the pupil skill enough to learn the remainder by himself" (**17**: 317).

I should like to make a plea for simplified phonics, particularly in Grades I and II. In looking over reading manuals and courses of study, one is amazed at the large number of phonograms that children are expected to learn. In ten reading manuals published within the last three years,[1] the number of phonograms to be taught in

[1] See the list of reading manuals appearing at the end of the article.

TABLE 1

PHONOGRAMS LISTED IN TEN READING MANUALS FOR TEACHING IN GRADES I AND II*

Phonogram	Frequency	Elson-Gray	Unit-Activity	New Path to Reading	Guidance in Reading	Child Development	Friendly Hour	Alice and Jerry	Child's Own Way	Happy Road to Reading	Children's Bookshelf
able	1						X				
ace	1						X				
ack	3					X	X			X-1	
ai	4					X	X			X	X
ain	1						X				
air	1						X				
ake	4		X			X	X-1			X	
al	2		X				X				
ame	1						X-1				
ang	3					X	X	X			
ap	1						X-1				
ar	7	X-1		X		X	X	X-1	X-1	X	
āre	1						X				
ark	1						X				
atch	1						X				
aw	5	X		X		X-1	X	X-1			
ay	8	X-1	X		X-1	X-1	X-1	X-1		X-1	X
ĕa	4					X	X			X	X
ĕa	1					X					
ĕad	1						X				
ear	1						X				
ed(t)	2					X					X
ed	9	X-1	X-1	X		X-1	X-1	X-1	X-1	X-1	X-1
ee	6	X-1	X			X-1	X-1			X	X
ell	6	X-1	X		X-1	X	X			X	
en	6	X	X		X-1	X	X-1		X-1		
er	10	X-1	X	X	X-1	X-1	X-1	X-1	X-1	X	X-1
ent	1									X	
es	8	X	X	X		X-1	X	X		X	X-1
est	8	X-1		X	X-1		X-1	X-1	X-1	X	X
et	4	X-1	X		X-1		X-1				
ew	3			X				X-1	X-1		
ick	3					X	X			X	
ide	1						X-1				
īe	3			X		X					X
iē	1					X					
ig	1						X-1				
igh	2					X		X			
ight	7	X-1	X	X		X-1	X	X-1		X-1	
ine	1						X-1				
ing	10	X-1	X-1	X	X-1	X-1	X-1	X-1	X-1	X-1	X-1
ink	1			X							
ir	7	X		X		X	X	X-1	X-1	X	
ish	1					X					

* Phonograms followed by "X-1" are suggested for first-grade work.

TABLE 1—*Continued*

Phonogram	Frequency	Elson-Gray	Unit-Activity	New Path to Reading	Guidance in Reading	Child Development	Friendly Hour	Alice and Jerry	Child's Own Way	Happy Road to Reading	Children's Bookshelf
oa	3					X				X	X
ock	3					X	X			X	
oi	5			X		X		X-1	X-1	X	
oil	1						X				
oke	1						X				
ong	2						X	X			
o͞o	6	X-1	X	X		X-1		X-1		X	
o͝o	5		X	X		X		X-1		X	
ook	3				X-1		X			X-1	
oon	1						X				
op	2					X-1	X-1				
ore	1							X-1			
ose	1						X-1				
ot	2		X				X-1				
ou	7	X-1	X	X		X-1		X-1	X-1	X	
ought	1				X-1						
ound	2						X			X	
ow	9	X-1	X	X	X-1	X-1	X	X-1	X-1	X	
ow(ō)	5			X		X	X	X-1		X	
own	1						X				
ox	1						X				
oy	7			X	X-1	X-1	X	X-1	X-1	X	
uck	2					X				X	
um	1					X					
ump	1					X-1					
un	6		X		X	X	X-1			X-1	X
ung	1						X				
ur	7	X		X		X	X	X-1	X-1	X	
ut	1						X-1				
Total		18	18	20	12	39	54	23	13	31	13

Grades I and II ranges from twelve in one manual to fifty-four in another, not including consonant blends and digraphs or words. The phonograms suggested in these ten manuals are shown in Table 1. When one considers that there are 104 ways of representing 13 vowel sounds and that one vowel may have from 26 to 30 functions (30), one realizes what an enormous task it is for a seven-year-old child to learn all the ways of expressing vowel sounds.

Because certain phonograms, such as *all, an, and, at, in, old, or,* are words which occur frequently in the child's reading, he must learn these anyway; using them as phonograms does not add to his vocabulary load. Since some phonograms, *ed, en, er, est, un,* are

also prefixes or suffixes, there may be a reason for teaching them. However, they may be postponed until prefixes and suffixes are taught as such—in Grade III or IV. The double-vowel phonograms (with the first vowel long and the second silent), as in "meat," "pail," "goat," "rode," and "time," may be grouped and taught in one lesson. I have found that children have no more difficulty with the group than with one phonogram, for example, *ae* as in "came," if their attention is called to the generalization that only four letters (*a, e, i, o*) "take partners" and that only these same four letters can "be partners."[1] The vowel *u* is omitted because the words in which *u* has a long sound—"blue," "true," etc.—are seldom used in primary readers and can be learned as sight words. In this way the number of vowels to which the "partner" rule applies is kept to a minimum. Only a few phonograms should be taught, but those few should be the phonograms with high frequency in order that phonics may not become an additional burden for the child but may be made a means of easing the reading task. Instead of the rule that final *e* makes the preceding vowel "say its name," the child learns the rule that a letter, when taking a "partner," always says its name and the "partner" is silent. A sampling analysis (every tenth page) of six recently published second readers shows that one word in twelve comes under this rule. Teaching the double-vowel phonograms in this way will remove seventeen phonograms from the composite list given in Table 1.

The phonograms *er*, *ir*, and *ur* may be omitted and letter phonics be substituted. They have the same sound as the consonant *r*, as is seen in the following words:[2] "purred," "older," "clever," "hurt," "person," "purple." Since the child already knows the consonant sound of *r*, it seems a wasteful burden to add three extra forms for the same sound.

Because the short sounds of the vowels are similar and therefore difficult to discriminate, particularly for a child who has had little

[1] There are exceptions to the rule because our language is not phonetic. Adjacent vowels are not always "partners," but, when they are "partners," the first says the name.

[2] Letters and words underlined are those to which the teacher calls attention as aids in pronouncing unfamiliar words.

experience with phonetics, it seems wise to eliminate as many as possible of these meaningless word elements, such as *ack*, *ock*, *uck*, *ick*, *ut*, *ot*, *et*, and *ell*, and to substitute letter phonics. Letter phonics, together with context clues, prove helpful, as in the words "spend," "black," "pocket," "cricket," "crackers," "butter," "speckled," "struck," "spill." True, the child may not always get the exact pronunciation, but, by using the context clue, he will probably know what the word should be, since most of the words in a young child's reading are already in his speaking vocabulary. Dolch says: "Teaching of letter phonics is characteristic of all systems. . . . . Since all words are made up of letters, it is obvious that letter phonics will help to some extent in the sounding-out of any words, short or long. . . . . Letter phonics is and always will be of constant usefulness in reading" (**9**: 121–24). Letter phonics cannot replace the learning of phonograms, nor is it desirable for a child to attack an unfamiliar word letter by letter. The child, however, should be able to pick out quickly those elements in a word that are the most likely to help him—and these elements will be consonants because a consonant (in most instances) has only one sound and can therefore be depended on. The following words illustrate how letter phonics can aid in the pronunciation of words: "smells," "thimble," "restaurant," "letter," "front," "dinner," "dressed."

According to these arguments the list of phonograms given in Table 1 may be reclassified as is shown in Table 2.

Before a phonogram is included in the list to be taught, it should be evaluated according to the following criteria: (1) Is this phonogram a clue to a sufficient number of words in the child's reading vocabulary to make the teaching of it worth while? (2) Is this phonogram of more value than any other clue to the recognition of the word? It is difficult to say just how many phonograms need to be taught, but perhaps not more than ten, excluding words, consonant blends, suffixes, and prefixes.

The following has comprised the subject matter for vocabulary study as taught for the last three years in Grade II of the elementary training school in the University of Wyoming: (1) review of simple consonant sounds; (2) sight words on Dolch's list (**7**: 458–59); (3) consonant digraphs: *ch*, *sh*, *th*, *wh*; (4) consonant blends, such as *bl*,

br, fl, fr, gr, gl, sm, str, tr; (5) double vowels: combinations of *a, e, i, o;* (6) the phonograms *ing, ay, ar, aw, oi, oy, ow, ight.* These items have been found to give a sufficient amount of phonic knowledge for the second-grade child. By the end of Grade II the pupil should use several techniques in gaining independence in reading: recognize

TABLE 2

SIMPLIFIED CLASSIFICATION OF PHONOGRAMS TO BE TAUGHT IN GRADES I AND II

Prefix or Suffix	Difficult Phonograms	Unnecessary Phonograms	Double-Vowel Phonograms	Preferred Phonograms
ed	ack	ark	able	ar
en	al	atch	ace	aw
es	ang	ear	ai	ay
est	ap	ell	ain	ight
un	ă	ent	air	ing
	ăd	er	ake	oi
	et	ĭ	ame	o͝o
	ew	ig	ār	o͞o (look)
	ick	igh	ē	ou
	ock	ink	ee	ow
	ong	ir	ide	ow (show)
	op	ish	ī	oy
	ot	oil	ine	
	uck	ook	oa	
	um	oon	oke	
	ung	ought	ore	
	ut	ound	ose	
		own		
		ox		
		ump		
		ur		
		ed (t)		

and apply the preferred phonograms, the double-vowel rule, letter phonics, context clues, and initial sound of the word. If he uses these methods, he is well on the way to becoming an efficient reader.

PHONICS IN INTERMEDIATE GRADES

Dolch has raised a vital question: "Since primary phonics mean letter phonics or phonogram phonics, can these types of phonic-teaching help in the sounding-out of polysyllables which children must do in the nine years of school after the primary grades?" (9: 122.) Dolch found that the important phonograms usually taught in the primary grades are not syllables in polysyllabic words

and are, therefore, of doubtful value in the sounding of polysyllables. He says: "What the schools definitely need is a teaching of the phonics of polysyllables. . . . . Facility in attacking polysyllables will go far in eliminating much of the remedial work in reading in the upper grades and in high school" (9: 124).

It has been the tendency to charge the primary teacher with full responsibility for providing every pupil with a method for becoming an independent reader. Since, as Dolch has pointed out, children need to sound out polysyllables during all their years of reading, the teacher in the intermediate grades must continue phonic analysis, as well as other techniques of word recognition, to the end that every child may become an efficient reader. A list of phonograms and other helps useful in sounding out polysyllabic words would be a worth-while contribution to the field of intermediate-grade reading.

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ORAL-RECITATION PROBLEMS OF STUTTERERS

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THE study reported in this article was carried out in order to determine the methods used by teachers in handling stutterers in the oral-recitation situation and to determine the effect of these methods on the stutterers. The study was prompted by the need for more definite knowledge than was available concerning the techniques that should be used by teachers in handling stutterers in the classroom.

SUBJECTS AND PROCEDURE

Seventy-two stutterers and fifty teachers served as subjects for this survey. The stutterers included sixty boys and twelve girls, thirty-six of whom were pupils in the public schools of South Bend, Indiana. The remaining stutterers included ten from the Speech Clinic at the State University of Iowa, nine from Purdue University, and seventeen from the public schools in East Chicago, Indiana. The fifty teachers from Grade I through senior high school were chosen from among teachers who had had stutterers in their classes. Information was secured from the stutterers by means of personal interviews, supplemented by a questionnaire. A second questionnaire was used to secure information from the teachers.

REACTIONS OF TEACHERS

A survey of the teachers' responses shows that the most common reactions of teachers toward stutterers are sympathy and pity. Forty of the fifty teachers considered that therapeutic treatment of stuttering was definitely beyond their ability. Thirty-two methods were used by the fifty teachers in handling stutterers in the classroom. The large number of methods indicates that, as a rule, teachers are not particularly definite nor particularly consistent in their policies regarding stuttering pupils. Nineteen different methods

were advocated by different teachers as the most effective. The largest number of teachers maintained that building up confidence and making the stutterer feel at ease are the most effective methods. It should be pointed out, however, that these are really not methods, but aims.

The sixteen causes reported for stuttering indicate a wide variance of opinion among teachers on this subject. The largest group of teachers, comprising 50 per cent, believed that stuttering is caused by some form of "nervousness." Among other reasons given were lack of confidence, habit, imitation, lack of control of throat muscles, and malformation of the speech organs. Since a teacher is inclined to treat a stuttering case according to his idea of the cause, one can see the serious results that might ensue through a lack of knowledge on this subject.

REACTIONS OF STUTTERERS

The responses made by the seventy-two stutterers concerning methods used by their teachers in connection with oral recitation show that twenty-nine of these stutterers made use of written work to compensate for their shortcomings in oral recitation, while forty-three did no extra written work. Sixty-two felt that their oral recitations were not so creditable as their intellectual ability would warrant. Approximately 50 per cent admitted having given the wrong answer or having said, "I don't know," in order to avoid the speaking situation. Thirty-one, or almost 50 per cent, reported having been retarded in school because of their stuttering, but only eleven of these believed that their teachers were responsible for their retardation.

Only six stutterers felt that they should be excused from oral recitations entirely. The remaining sixty-six believed that some oral work was advisable, since it tended to give them more control over the speaking situation and made them feel less inferior. The majority, however, felt that some consideration should be shown them and that they should be excused from recitations which were too long or too difficult to undertake. *Most of them thought that the most satisfactory policy would be to let them recite when they volunteer to do so.*

More than 50 per cent of the stutterers reported that none of the various methods used by the teachers was particularly helpful. A

kind, friendly, jolly disposition was the type of personality most of them considered essential in a teacher. Forty-three per cent replied that they had had teachers who did not know of their difficulty. Some of these were mild cases, and the more serious cases believed that they had concealed their handicap from their teachers by not reciting and by remaining much in the background. However that may be, the indications are that estimates of the incidence of stuttering, when based on teachers' judgments, are probably inaccurate.

The following quotations are taken from the questionnaire responses of various stutterers in this study and are given as representative of the group reactions. They furnish further insight into the problems of stutterers in the classroom.

I remember two teachers who were far from being just, mostly, I believe, because they were so impatient. The first teacher that I remember as being impatient was the fifth-grade teacher who was generally feared about the school because she was too exacting and intolerant. She acted toward my stuttering as though I were generally incompetent and slow.

A teacher that was given to constant sarcasm and cutting remarks made it twice as hard for me. I felt that every time I would make a recitation she would be likely to make some cutting remark if the answer was wrong, so rather than take a chance on such criticism I would say as little as possible in her class. One of the greatest drawbacks is a teacher who is always trying to help by supplying the answer before you can say it, if you start to stutter or hesitate. They mean well, but many times I have wondered why they ask me in the first place if they are going to give the answer as soon as I stand up.

Only one teacher made me feel inferior to the class and after that I felt that way in every class. That was the teacher who forced me to give an oral report in geography. The report was well written, but a flop orally and I felt it a long time after. A few teachers forced me to recite, but I avoided this by playing dumb.

I found that I could get along much better with a teacher who had patience and would give me more time to answer questions than one who made me sit down because she couldn't waste time.

If a teacher seems interested in what you are saying, that helps more than anything else. If her attitude is indifferent, I would never bother saying any more than I had to at any time and would never recite unless called upon.

One teacher took a great burden off my mind by treating me as a normal person.

I remember one teacher that called on someone else when I was trying to recite. This upset me to a great extent and gave me the further impression that my stuttering was not only a burden to myself but also a burden to other people.

I have mentioned but a few of the outstanding incidents which illustrate the intimate relationship existing between a stutterer's school life and his stuttering. Many more could be listed if I could remember them. At any rate, I hope that these few will impress upon the teachers the responsible position which they hold being where they can adjust the stutterer to his stuttering. Innumerable moments of misery could be turned into moments of happiness did but one teacher know how to treat properly one stutterer.

CONCLUSIONS AND RECOMMENDATIONS

It would appear that to a significant degree the attitudes of stutterers toward school and education generally are determined by their experiences in oral recitation. On the whole, these experiences are not conducive to attitudes that facilitate learning. Moreover, the experiences of stutterers in connection with oral recitations appear frequently to be more detrimental than beneficial so far as general personality development and speech development are concerned.

These facts constitute problems for the school staff and particularly for the classroom teacher, since it is he who most directly determines the nature of the experience which the stutterer undergoes in oral recitation.

The findings of this study indicate that a large majority of the classroom teachers interviewed consider themselves inadequately trained for meeting these somewhat unusual and subtle problems. This inadequacy is felt with regard both to their knowledge of stuttering and to their knowledge of principles of dealing with the adjustment problems occasioned by stuttering. The stuttering pupils also express the belief that teachers' methods and policies are often unsatisfactory and frequently unwise. This finding implies that, insofar as stuttering resembles other behavioristic deviations found among school children, classroom teachers, as represented by those interviewed in this study, have not had adequate opportunity to become trained in handling classroom problems associated with such deviations. It is reasonable to recommend a re-evaluation of current

teacher-training facilities and policies with respect to the problems considered in this study.

Certain positive recommendations may be made, at least tentatively, on the basis of the present study: (1) Some type of special consideration should be given the stuttering pupil in the matter of oral recitation. Probably the most desirable plan is to call on the stutterer to recite only when he volunteers to do so. (2) The stutterer should not be hurried. He should not be interrupted in his efforts at speaking, nor should an attempt be made to say the words for him. Irritation, indifference, or an expression of boredom on the part of the teacher creates a decidedly unfavorable reaction in the stutterer. (3) A friendly atmosphere should be created by the other members of the class in order that the stutterer may not feel excluded from, nor inferior to, the rest of the group. (4) It is usually desirable to demand extra written work from the stutterer to the extent that he is excused from oral recitation. (5) It is especially desirable to develop a sincere, friendly interest in the stuttering pupil, to gain his point of view, and to establish his confidence through personal conferences concerning his problems and means of meeting them. (6) It is desirable to prepare the stutterer emotionally and intellectually to meet as many speech situations as possible. He should in no case, however, be forced into such situations. Rather, the instructor should strive to create a desire in the stutterer to take part in oral recitations.

It is not to be expected that the classroom teacher know how to treat stuttering clinically, but the teacher should know how to train the stuttering pupil to develop such attitudes toward himself and his disorder as will facilitate his scholastic progress and general personality development. In a word, if the teacher cannot cure stuttering (and it is not reasonable to expect him to cure it), his job becomes that of teaching the child to live with his stuttering as gracefully and as efficiently as possible.

PREDICTING FIRST-GRADE READING ACHIEVEMENT

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PROBLEMS OF THE INVESTIGATION

THE purposes of the study reported in this article were to determine some of the causes of failure of first-grade entrants in the Billings public schools and, if possible, to set up formulas for predicting success in advance of instruction. The specific problems involved were: (1) What is the influence of vision on achievement in reading in Grade I? (2) Can reading achievement of first-grade entrants be predicted on the basis of mental-test scores? (3) To what extent can tests of reading readiness be depended on to point out the probable successes and failures in beginning reading?

SUBJECTS AND TESTS USED

The subjects for this study were the pupils of five first-grade rooms in the Billings public schools. The subjects were selected in such a way as to give as accurate a sampling as possible of all first-grade children in the system. The teachers in the rooms where the experiment was being carried out were experienced first-grade teachers with excellent teaching reputations.

Monroe's Reading Aptitude Tests for Prediction and Analysis of Reading Abilities and Disabilities and the Metropolitan Readiness Tests were administered to all first-grade entrants in the five selected rooms during the first week of the 1936–37 school term. These tests were administered by the classroom teachers of the respective rooms, who were assisted by student-teachers from the Eastern Montana State Normal School. All teachers and student assistants were first given careful instruction in the methods of conducting the examinations, and they were directed to follow in detail the instructions set up by the authors of the tests. The mental ages of the children were obtained on the Stanford Revision of the Binet-

Simon Intelligence Scale by H. C. Hines, head of the psychology department of the Eastern Montana State Normal School, and his corps of trained examiners. For determining the reading progress of the pupils, the Metropolitan Achievement Test, Grade I, Form A, was given to all pupils at the end of six months of instruction. This test was given by C. C. Shively, director of testing for the Billings schools. The vision of first-grade entrants was tested by means of the Keystone telebinocular in the hands of trained workers from the Normal School who were employed by the National Youth Administration under the direction of the writer.

The influence of vision on reading achievement was determined by computing the correlation between reading achievement, as measured by the Metropolitan Achievement Test, and the presence or the absence of visual defects, as measured by the telebinocular.

The value of measures of reading readiness in predicting reading achievement was determined by correlating the scores on the Metropolitan Achievement Test with the results obtained from the Monroe Reading Aptitude Tests and the Metropolitan Readiness Tests. Inasmuch as some of these tests, notably the Metropolitan Readiness Tests and the Metropolitan Achievement Test, measured some arithmetical ability as well as reading ability, it was found necessary to separate these items and to use partial as well as total scores in making computations.

The relation of mental age to reading achievement was found by correlating the Stanford-Binet mental age for each child with his score on the Metropolitan Achievement Test.

RELATION OF READING ACHIEVEMENT AND RESULTS ON TESTS OF VISION

The results of this study, as shown in Table 1, and of other studies that have dealt with the vision of first-grade children, particularly as measured by the telebinocular, warrant the following conclusions:

1. From 10 to 22 per cent of these first-grade entrants had defective visual acuity, as indicated by the results on Test 3.

2. Visual-fusion difficulties (Tests 2 and 7) were encountered by approximately a fifth of all first-grade pupils. Depth perception, another factor in proper eye co-ordination (Test 5), was lacking in 21

per cent of the pupils examined in this study and in as many as 38 per cent of the children examined in other studies.

3. Muscular imbalance of the eyes was found to be more prevalent in the case of lateral imbalance (Test 6) than in the case of vertical imbalance (Test 4), the percentages being 12 and 0.9, respectively. These percentages compare rather closely with those of other studies.

TABLE 1

ERRORS IN VISION OF 116 FIRST-GRADE ENTRANTS IN FIVE SCHOOLS IN BILLINGS, AS REVEALED BY KEYSTONE TELEBINOCULAR

TEST	PUPILS WITH DEFECTS	
	Number	Per Cent
1	.....	.....
2	23	19.8
3a	26	22.4
3b	11	9.5
3c	12	10.3
4	1	0.9
5	24	20.7
6	14	12.1
7	27	23.3
8	15	12.9
Pupils making errors on one or more tests	66	56.9

4. Common errors of focus (Test 8) which interfere with efficient vision were found in 13 per cent of the children examined in this study. Other studies, however, show percentages as high as 37.

5. When the results of the visual tests were compared with the reading achievements of these first-grade pupils, little relation was found. Correlations between failures on each of these tests and reading achievement were negative for most cases. Visual acuity was, however, an exception to the rule. In this case the biserial coefficient of correlation was found to be $.31 \pm .08$. Other studies reviewed report an almost total lack of relation between reading achievement and results on telebinocular tests.

Lack of visual efficiency may be a serious drawback to children in their school work. Nervous instability, restlessness, headaches, or

other results of visual deficiency may seriously hamper school progress in one way or another, but, according to the present evidence, such defects, on the whole, do not impair reading efficiency at the first-grade level to the extent that prediction of success or failure can be based on the absence or the presence of such defects.

RELATION OF READING ACHIEVEMENT AND MENTAL AGE

Many factors enter into the process of getting the child ready to read or in the maturation of the child to the point where reading is possible for him. Two of these factors, mental age and readiness-test scores, were considered at this point in the study.

TABLE 2

CORRELATIONS BETWEEN MENTAL AGE AND READING ACHIEVEMENT OF FIRST-GRADE ENTRANTS IN FIVE INVESTIGATIONS

Study*	Mental Test Used	Number of Cases	Correlation with Reading Achievement
Morphett and Washburne (4)	Detroit First-Grade Intelligence	141	.59
Morphett and Washburne (4)	Stanford-Binet	141	.51
Harrison (2)	Stanford-Binet	120	.377
Deputy (1)	Pintner-Cunningham	103	.70
Present study	Stanford-Binet	116	.62

* The numbers in parentheses refer to the studies listed at the end of this article.

The data in Table 2, showing the results of a review of the studies dealing with the relation of mental age to reading achievement, seem to point to the same conclusion, namely, that mental age has a definite relation to success in reading in Grade I. While the correlations between these factors range from a low of .377 to a high of .70, it must be remembered that various criteria were used to measure reading achievement and that both individual and group tests were used to measure mental age. In the present study the correlation between the Stanford-Binet mental age and the Metropolitan Reading Achievement Test was found to be $.62 \pm .03$, which is similar to the results of the other studies reported in Table 2.

In Table 3 are shown the results of a comparison of the factors of mental age and reading progress in terms of the percentage of children in the present study doing average work. Here, as was the case in the study by Morphett and Washburne (4), marked success was not obtained until a mental age of six years and six months was reached. These results, then, seem to agree with, and consequently to validate, the other studies compared. It is extremely doubtful, therefore, whether children with mental ages of less than six years and six months should attempt the reading process unless they have other talents which might reasonably point to success.

TABLE 3

NUMBER OF CHILDREN AT EACH MENTAL-AGE LEVEL AND PERCENTAGE MAKING AVERAGE PROGRESS IN READING

Mental Age in Years and Months	Number of Children	Percentage Making Average Progress or Better*
5-0 to 5- 5	7	29
5-6 to 5-11	9	33
6-0 to 6- 5	28	29
6-6 to 6-11	24	58
7-0 to 7- 5	24	71
7-6 to 7-11	13	85
8-0 to 8- 5	6	100

* No percentages were figured for groups of less than six children.

RELATION OF READING ACHIEVEMENT AND SCORES ON READING-READINESS TESTS

Table 4 shows that in practically all the studies here compared, fairly high correlations have been found between readiness-test scores and reading achievement. In spite of the fact that different criteria were used to measure both reading readiness and reading achievement, the correlations between these two factors ranged between .41 and .66. In the present study the scores on the Metropolitan Readiness Tests correlated with reading achievement to the extent of $.59 \pm .03$, and the scores on the Monroe Reading Aptitude Tests correlated $.41 \pm .04$ with reading achievement.

PREDICTING SUCCESS OF BEGINNERS IN READING

The correlations between reading achievement and the five factors investigated in this study are given in Table 5. Positive correlations with reading achievement are shown in all cases. Three of the factors —the Metropolitan Readiness Test, the Monroe Reading Aptitude

TABLE 4

CORRELATIONS FOUND IN FIVE STUDIES BETWEEN READING ACHIEVEMENT AND SCORES ON READING-READINESS TESTS OF FIRST-GRADE ENTRANTS

Study*	Readiness Test Used	Number of Cases	Correlation with Reading Achievement
Lee, Clark, and Lee (3).....	Lee-Clark Reading Readiness	164	.49
Harrison (2).....	Metropolitan Readiness	120	.485
Wilson and Burke (5).....	Metropolitan Readiness	25	.57
Deputy (1).....	Tests devised by author	103	.66
Present study.....	Metropolitan Readiness	116	.59
Present study.....	Monroe Reading Aptitude	116	.41

* The numbers in parentheses refer to the studies listed at the end of this article.

TABLE 5

CORRELATIONS OF FIVE VARIABLES WITH READING ACHIEVEMENT FOR 116 FIRST-GRADE ENTRANTS IN FIVE SCHOOLS IN BILLINGS

Variable	Correlation
Chronological age.....	$.12 \pm .06$
Mental age on Stanford-Binet test.....	$.62 \pm .03$
Monroe Reading Aptitude Tests.....	$.41 \pm .04$
Metropolitan Readiness Tests.....	$.59 \pm .03$
Visual acuity.....	$.31 \pm .08$

Tests, and mental age—were high enough to seem to have special significance as predictive instruments. Visual acuity, with a correlation of .31 and a probable error of .08, was less significant than the three criteria mentioned. This fact, together with the extremely low correlations obtained by other investigators between visual acuity and reading achievement, eliminates it from further consideration as a predictive instrument in this study. Chronological age, with a correlation of $.12 \pm .06$, is also too low to have any weight as a predictive factor.

In this study the combination yielding the highest multiple correlation with reading achievement was the combination of mental age and scores on the Metropolitan Readiness Tests, which in Table 6 is shown to give a multiple correlation of .64±.037. The use of mental age and the other readiness test (Monroe Reading Aptitude Tests) gave a multiple correlation of .63±.038, while the use of the two readiness tests as predictive instruments gave a correlation of only .59±.04. When all three independent variables were used, the multiple coefficient thereby obtained was .64±.037.

TABLE 6

MULTIPLE AND PARTIAL CORRELATIONS BASED ON DATA OBTAINED FROM 116 FIRST-GRADE ENTRANTS IN THE BILLINGS PUBLIC SCHOOLS

Variables*	Correlation
Multiple correlations:	
$R_{1(23)}$	.64±.037
$R_{1(24)}$	.63±.038
$R_{1(34)}$	.59±.040
$R_{1(234)}$	.64±.037
Partial correlations:	
$r_{12.3}$	.32±.056
$r_{14.3}$	.01±.063
$r_{24.3}$	.07±.062
$r_{13.2}$	.22±.059
$r_{14.2}$	.15±.060
$r_{34.2}$	.54±.044
$r_{12.34}$	.32±.056
$r_{13.24}$	.17±.060
$r_{14.23}$	.20±.060

* 1=reading achievement; 2=mental age; 3=scores on Metropolitan Readiness Tests; 4=scores on Monroe Reading Aptitude Tests.

SUMMARY

Only a slightly increased correlation was obtained when either of the two readiness tests was combined with mental age. When all three of these variables were computed as a multiple coefficient of correlation with reading achievement, the result was but little greater than when mental age alone was used. Mental age, therefore, seems to be superior to score on reading-readiness tests as an instrument for predicting reading achievement of first-grade entrants.

The relation between good and poor vision of pupils and their success in learning to read in Grade I is extremely low and even negative in some cases.

The relation of mental age of first-grade pupils to their reading achievement is relatively high, the correlation between these two factors being $.62 \pm .03$. The mental age required to do average work in first-grade reading was found to be six years and six months or better. Below this age far more pupils failed than succeeded.

The relation of reading readiness, as measured by the Metropolitan Readiness Tests and the Monroe Reading Aptitude Tests, to reading achievement, while distinctly positive ($.59 \pm .03$ and $.41 \pm .04$), was lower than the correlation obtained when mental age was used as the criterion.

Other Studies

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5. Wilson, Frank T., and Burke, Agnes. "Reading Readiness in a Progressive School," *Teachers College Record*, XXXVIII (April, 1937), 565–80.

AGE OF PARENT AND INTELLIGENCE OF OFFSPRING

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THIS article reports a study of the relation between age of parent and intelligence of offspring made through an examination of the records of the Georgia State Womans College. Differences between age of parent and of daughter were determined, and ratings were secured on several tests given at entrance into college. The Psychological Examination of the American Council on Education was used to test general ability. In the autumn of 1937 the Cooperative Test Service tests in English, mathematics, social studies, and science were used. In the preceding years the tests used in these fields were prepared by the University System of Georgia. Tabulations were made according to migration of the family since the daughter's birth. Test ratings were tabulated according to whether the daughter was among the upper or the lower 50 per cent of the students taking a particular test.

Data for non-migrating families are presented in Table 1. These data show, with one exception, that the daughters ranking among the upper 50 per cent on each of the tests are more likely to have older parents than are the daughters in the lower 50 per cent. Conversely, the daughters in the lower 50 per cent on the tests are more likely to have young parents than are the daughters in the upper 50 per cent. Thus, on the American Council test 53.7 per cent of the daughters in the upper 50 per cent have fathers who are thirty or more years older than themselves, whereas only 42.2 per cent of those in the lower 50 per cent have fathers of comparable ages. Conversely, of the daughters in the lower half, 57.8 per cent have fathers who are not more than thirty years older than themselves, whereas of those in the upper half only 46.3 per cent have fathers this young. The same situation prevails when age of mother is considered in relation to age and rating of daughter. Thus, 50

per cent of the daughters who are in the upper half on the American Council test have mothers who are more than twenty-five years older than the daughters, whereas among daughters in the lower half, only 33.3 per cent have mothers who are this old.

TABLE 1

RELATION OF AGES OF PARENTS TO DAUGHTER'S COLLEGE-ENTRANCE RATINGS ON FIVE TESTS FOR FAMILIES WHO HAD NOT MIGRATED FROM COUNTY IN WHICH DAUGHTER WAS BORN

DAUGHTER'S STANDING IN TEST	PERCENTAGE OF FATHERS WHOSE AGES EXCEEDED THOSE OF DAUGHTERS—			PERCENTAGE OF MOTHERS WHOSE AGES EXCEEDED THOSE OF DAUGHTERS—		
	Number of Cases	By 30 Years or Less	By More than 30 Years	Number of Cases	By 25 Years or Less	By More than 25 Years
American Council Psychological:*						
Lower half	64	57.8	42.2	51	66.7	33.3
Upper half	54	46.3	53.7	66	50.0	50.0
English:†						
Lower half	41	51.2	48.8	39	53.8	46.2
Upper half	66	39.4	60.6	81	59.3	40.7
Mathematics:†						
Lower half	59	52.5	47.5	60	58.3	41.7
Upper half	48	33.3	66.7	54	55.6	44.4
Social studies:†						
Lower half	35	57.1	42.9	46	69.6	30.4
Upper half	67	40.3	59.7	72	51.4	48.6
Science:†						
Lower half	44	52.3	47.7	47	66.0	34.0
Upper half	57	36.8	63.2	67	52.2	47.8

* The test ratings are based on data for the Georgia State Womans College. Since incomplete data on ages reduced the number of cases included, the number in the upper and the lower halves are not necessarily regular.

† The test ratings are based on percentile rankings of the white schools in the University System of Georgia.

The other tests show the same general relation between test ratings and parent-daughter age differential, with the exception of the English test in the case of the mother-daughter age differential. This exception will be considered later.

Certain sociological factors may be important in the relation between parent-daughter age differential and test ratings. It is pos-

sible that, as non-migrating parents become older, they become more stabilized in their particular communities than are younger parents. Vocational or economic stability within a family should aid learning and adjustment, of the kind here measured, because economic security tends to reduce home frictions and interferences with learning. Moreover, economically secure homes may be better able to supply books and other learning materials than are other homes.

There is the further sociological possibility that older parents were older at the time of marriage than were younger parents; marriage may have been delayed so that more general or professional education could be secured before family responsibilities were assumed. If older parents have a better educational or professional background than younger parents, they would probably be better able to assist their daughters in academic achievement, through home attitude and guidance, than would younger parents.

Older parents would also be more likely than younger parents to have children older than the daughters studied. Older siblings might offer helpful guidance to younger children, in ways reflected in test scores.

Reference may be made to a biological possibility. Aging of parent may affect the germ plasm, the advantage in the test ratings of the daughters of older parents being thus explained. Although age of parent as influencing sex of offspring may be discarded, all possibility that parental age may influence germ plasm is not thereby precluded. In some insects, for example, Drosophila, crossing-over decreases as the individual grows older.[1] In some plants age of pollen or of seed affects rate of mutation.[2] The broad jump from insects or plants to human beings does not preclude learning about human inheritance through study of other species. Leaving open, however, the question of the effect of parental age on the learning rate of offspring, through the effect of age on the germ plasm, the

[1] Laurence H. Snyder, *The Principles of Heredity*, p. 161. Boston: D. C. Heath & Co., 1935.

[2] A. Franklin Shull, *Heredity*, p. 239. New York: McGraw-Hill Book Co., Inc., 1938 (third edition).

sociological explanation of the age differentials revealed in this article seems, at present, to be preferred.

The foregoing discussion does not explain the fact that the percentage (46.2) of the daughters in the lower half on the English test who were from older mothers is larger than the percentage (40.7) in the upper half on that test—the converse relationship, of course, pertains to daughters of younger mothers. It may be noted here that recent decades have witnessed great expansion in educational opportunity, especially for women, as well as expansion in the circulation of periodical literature which fosters the interests of women and the home.[1] It is conceivable that through these avenues younger mothers have secured a more thorough training and more extensive experience in the field of English than have older mothers, so far as maternal training and experience are such as might be reflected in test performances of daughters. For similar reasons of training and experience, one might expect less of such influence, according to age of mother, in the case of ratings on the other tests.

The data for the migrating families, which are given in Table 2, are not so consistent. On the mathematics and the science tests the relation of the parent-daughter age differential to the test ratings is the same as that in the case of non-migrating families—the percentage of daughters in the upper half who have older parents being more than the percentage in the lower half. The same relation appears between father's age and daughter's rating on the social studies and between mother's age and daughter's rating on the American Council Psychological Examination. In five instances among these migrating families, differences in the percentages of less than 0.5 appear: for all comparisons in English and for the mothers in social studies. Obviously these differences are of no significance. In the case of the father's age and daughter's rating on the American Council test, the situation is somewhat more anomalous. Here a distinctly smaller percentage of daughters in the upper than

[1] *a*) Harold H. Punke, "Periodical Literature in Adult Education," *Educational Administration and Supervision*, XX (March, 1934), 216–26.

b) Harold H. Punke, "Cultural Change and Changes in Popular Literature," *Social Forces*, XV (March, 1937), 359–70.

in the lower half have fathers in the older age group. No satisfactory explanation for this finding occurs to the writer.

TABLE 2

RELATION OF AGES OF PARENTS TO DAUGHTER'S COLLEGE-ENTRANCE RATINGS ON FIVE TESTS FOR FAMILIES WHO HAD MIGRATED FROM COUNTY IN WHICH DAUGHTER WAS BORN

Daughter's Standing in Test	Percentage of Fathers Whose Ages Exceeded Those of Daughters—			Percentage of Mothers Whose Ages Exceeded Those of Daughters—		
	Number of Cases	By 30 Years or Less	By More than 30 Years	Number of Cases	By 25 Years or Less	By More than 25 Years
American Council Psychological:*						
Lower half	34	52.9	47.1	28	64.3	35.7
Upper half	58	60.3	39.7	53	58.5	41.5
English:†						
Lower half	34	44.1	55.9	26	61.5	38.5
Upper half	45	44.4	55.6	55	61.8	38.2
Mathematics:†						
Lower half	40	50.0	50.0	44	68.2	31.8
Upper half	34	35.3	64.7	39	53.8	46.2
Social studies:†						
Lower half	25	48.0	52.0	26	61.5	38.5
Upper half	48	41.7	58.3	54	61.1	38.9
Science:†						
Lower half	32	46.9	53.1	31	67.7	32.3
Upper half	41	43.9	56.1	52	59.6	40.4

* The test ratings are based on data for the Georgia State Womans College. Since incomplete data on ages reduced the number of cases included, the number in the upper and the lower halves are not necessarily regular.

† The test ratings are based on percentile rankings of the white schools in the University System of Georgia.

A general comparison of the data for migrating and non-migrating families reveals among migrants certain irregularities and variations from the general pattern of parent-daughter age differential described for non-migrants. Movement and shifting of contacts, especially if frequent, might be expected to produce some disturbance. In a general way, however, the data for migrants substantiate those

for non-migrants—the daughters in the upper half on the test ratings come from parents in the older age groups to a larger extent than do daughters in the lower half on the test ratings.

Certain evaluative comments may be in order. The arbitrary age division between older and younger parents is unimportant for comparisons of the type herein made. Refinements in the tabulating of frequency and distance of migration might have been worth while had the records carried the necessary data. A study of parent test ratings or of family tensions might also have been enlightening if needed data had been available. The data are somewhat limited from the standpoint of number of cases but not from that of number of tests considered. Moreover, the data are rather consistent in their indications.

Accordingly, the study as it stands should be of value in determining the relation of age of parent to intelligence of offspring. So far as it goes, the study suggests that children of older parents tend to be more intelligent, as intelligence is here measured, than do children of younger parents. It seems that what difference there is in this respect can be better explained on sociological than on biological bases.

It is possible that different results might be secured from similar studies made in other parts of the country, where economic status of homes, educational opportunity, age at marriage, and possibly diet are different from those in the region here studied.

SELECTED REFERENCES ON KINDERGARTEN-PRIMARY EDUCATION

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THIS, the seventh annual bibliography of selected references in kindergarten-primary education, covers the period from January 1, 1938, to January 1, 1939. The basis of selection is the same as that used for the earlier lists.

GENERAL EDUCATIONAL ASPECTS[1]

185. DRISCOLL, GERTRUDE P. "Guidance at the Elementary Level," *Teachers College Record*, XL (October, 1938), 25–33.

Discusses the relation of personality development to factors of growth, the effect of early childhood experiences on later behavior, and the influence of emotion on thinking and motivation.

186. EDUCATIONAL POLICIES COMMISSION. *The Purposes of Education in American Democracy*. Washington: Educational Policies Commission of the National Education Association and the American Association of School Administrators, 1938. Pp. x+158.

Sets forth the view that the achievement of democracy is the foremost responsibility of the schools and states specific objectives for each of four major purposes: self-realization, the improvement of human relationships, economic efficiency, and civic responsibility.

187. "Fifty Years of Child Study," *Child Study* (Anniversary number), XVI (November, 1938), 34–80.

Contains historical material on the progress of child development and parental guidance from 1888 to 1938. Among the contributors to this issue are Arnold Gesell, Adolf Meyer, Bernard Glueck, and Sidonie Gruenberg.

188. LANE, ROBERT HILL. "Blueprint for the Lower School," *Progressive Education*, XV (October, 1938), 489–92.

Outlines a plan for unifying the school for the child from two to eight.

189. PULLIAS, E. V. "The Relationship between Education and Mental Hygiene," *Mental Hygiene*, XXII (October, 1938), 612–24.

[1] See also Item 332 (Clarke) in the list of selected references appearing in the June, 1938, number of the *Elementary School Journal;* Item 519 (Dewey) in the October, 1938, number; Item 39 (Lane) in the January, 1939, number; and Item 183 (Updegraff, Dawe, Fales, Stormes, and Oliver) in the March, 1939, number.

Discusses a program for promoting mental health in nursery school, kindergarten, and primary grades.

190. ROGERS, JAMES FREDERICK. "Developing Strong Bodies and Able Minds," *School Life*, XXIV (November, 1938), 48, 58.

Urges teachers to make a daily appraisal of pupils and to utilize available services for correction and prevention of physical and mental handicaps.

191. RYAN, W. CARSON. *Mental Health through Education*. New York: Commonwealth Fund, 1938. Pp. viii+316.

Appraises situation observed in clinics and schools throughout the country and indicates need of applying scientific findings in mental hygiene and development of young children.

192. SEGEL, DAVID. *Nature and Use of the Cumulative Record*. United States Office of Education Bulletin No. 3, 1938. Pp. vi+48.

Discusses place, current practices, suggestive procedures, and prognostic value of cumulative records.

193. WRIGHTSTONE, J. W.; RECHETNICK, JOSEPH; MCCALL, WILLIAM A.; and LOFTUS, JOHN J. "Measuring Intellectual and Dynamic Factors in Activity and Control Schools in New York City," *Teachers College Record*, XL (December, 1938), 237–44.

Deals with a comparison of the results obtained from activity and control schools on tests of achievement, intelligence, and dynamic factors. Other phases of this experiment appeared in the *Teachers College Record* for April and December, 1937, and February, 1938.

CURRICULUM, TEACHING PROCEDURES, AND MATERIALS[1]

194. "Autumn Books 1938," *Elementary English Review*, XV (October, 1938), 238–45.

Gives a classified and annotated bibliography of children's books published in 1938.

195. COLEMAN, SATIS N. *The Book of Bells*. New York: John Day Co., 1938. Pp. viii+178.

Presents, in a style similar to the author's earlier *The Drum Book* (New York: John Day Co., 1931), facts and stories about bells of modern and ancient times. Includes suggestions for making and using bells.

196. DELONG, VAUGHN R. "Primary Promotion by Reading Levels," *Elementary School Journal*, XXXVIII (May, 1938), 663–71.

Sets up six requirements for a primary reading plan, two of which are mastery of a basic vocabulary and elimination of failure.

[1] See also Items 432 (Betts), 433 (Boney), 434 (Cole), 446 (Hockett), 459 (Witty), and 460 (Witty) in the list of selected references appearing in the October, 1938, number of the *Elementary School Journal*.

197. DEPEW, OLLIE. *Children's Literature by Grades and Types.* Boston: Ginn & Co., 1938. Pp. xiv+706.

Presents an anthology arranged for each grade under such types as poems, folk tales, fables, and modern stories. One section of the book treats the topics: historical development of literature for children, types of traditional and modern literature, ephemeral versus classical material, and literature in the schools.

198. FREDERICK, O. I. "Pupil Interests and Needs as a Basis for Curriculum Development," *Curriculum Journal*, IX (November, 1938), 321–22.

Stresses the point of view that education is most effective when for its material it does not go outside the immediate sensory experiences of boys and girls.

199. GRAY, H. A., "Audio-visual Learning Aids for the Primary Grades," *Elementary School Journal*, XXXVIII (March, 1938), 509–17.

Discusses two questions: "What contributions can properly prepared sound-film materials make to the learning process at these grade levels?" "How may such teaching aids be utilized effectively?"

200. HEFFERNAN, HELEN. "New Emphases in Primary Curriculum," *California Journal of Elementary Education*, VII (August, 1938), 15–20.

Emphasizes possibilities in social and natural sciences and in creative expression for building backgrounds for teaching reading and arithmetic.

201. HOGAN, MARITA, and YESCHKO, MARGARET. "Latin American Countries in Children's Literature," *Elementary English Review*, XV (October and November, 1938), 225–32, 270–74.

Gives annotated bibliography of twenty-one stories dealing with Mexico, Central America, and South America, which can be used in the primary grades.

202. *Inexpensive Books for Boys and Girls.* Compiled by the Book Evaluation Committee of the Section for Library Work with Children. Chicago: American Library Association, 1938 (second edition). Pp. 44.

Compiled for libraries and schools with limited funds. Groups books under "Picture Books and Easy Reading" and "Junior Books of General Interest." In separate section, charts "Analysis of Publishers Series" and information on format, appearance, appeal to children, print, paper, illustrations, margins, binding, and selection of titles.

203. KEENER, EDWARD E. "Teaching Primary Reading by the Non-oral Method," *Elementary English Review*, XV (December, 1938), 291–92, 308.

Presents a method of teaching reading as a "see and comprehend" process.

204. MASON, BERNARD S. *Drums, Tomtoms, and Rattles.* New York: A. S. Barnes & Co., 1938. Pp. 206.

Presents a detailed history of primitive percussion instruments, with suggestions for use in children's rhythm bands. Illustrations are included.

205. MATHIS, DOROTHY M. "Some Ten Cent Books Suitable for Primary Grades," *Elementary English Review*, XV (October, 1938), 233–35.

Selects forty-five books on a check list of criteria, including format, illustrations, content, child interest, and vocabulary load.

206. MILLIGAN, DAVID FREDERICK. *Fist Puppetry*. New York: A. S. Barnes & Co., 1938. Pp. xiv+130.

Regards puppetry as a logical introduction to drama for children. Explains how to make fist puppets and theaters and how to adapt and produce plays.

207. *Newbery and Caldecott Awards*. Chicago: American Library Association, 1938.

A leaflet describing the books that have received the Newbery and the Caldecott awards for outstanding books for children.

208. STEWART, ELLEN MCCARTER. "Speech Training for Small Children," *American Childhood*, XXIII (June, 1938), 60–61.

Discusses specific speech difficulties and procedures for correction.

209. WILLS, ANNIE R. "An Investigation of Relationship between Rate and Quality of Handwriting in the Primary School," *British Journal of Educational Psychology*, VIII (November, 1938), 229–36.

Studies speed and quality of handwriting at various levels in elementary school.

210. WITTY, PAUL, and KOPEL, DAVID. "The Interest Inventory in Directing Children's Reading," *Education*, LIX (September, 1938), 11–16.

Describes a study of children's interests and needs and gives an interest inventory as a teaching aid for remedial reading.

211. WULFING, GRETCHEN. "We Study Our Primary Program," *Childhood Education*, XV (September, 1938), 14–19.

Describes a four-point plan for improving the primary-grade program developed at San Jose, California.

INVESTIGATIONS AND EXPERIMENTAL STUDIES[1]

212. CHRISTIANSON, HELEN. *Bodily Rhythmic Movements of Young Children in Relation to Rhythm in Music*. Teachers College Contributions to Education, No. 736. New York: Teachers College, Columbia University, 1938. Pp. x+196.

Presents in a doctoral dissertation (1) a technique for observing children's behavior patterns during situations involving music, (2) a rating scale for responsiveness to rhythmic music, and (3) a basis for selection and evaluation of rhythmic music according to suitability for use with young children.

[1] See also Item 154 (Moore), Item 168 (Stoddard), and the study by M. Mantor, "An Objective Method for Recording Three- and Four-year-old Children's Enjoyment of Stories, Particularly Applied to a Study of Fanciful and Realistic Stories," in Item 169 in the list of selected references appearing in the March, 1939, number of the *Elementary School Journal*.

213. DAWSON, MILDRED A. "Elementary School Language Textbooks," *Elementary English Review*, XV (November and December, 1938), 275–84, 309–17; ———, XVI (January, 1939), 31–38.

Reports analytical studies of forty-five elementary language textbooks. (A continuation of the study reported in Item 469 in the October, 1938, number of the *Elementary School Journal*.)

214. FENDRICK, PAUL, and MCGLADE, CHARLES A. "A Validation of Two Prognostic Tests of Reading Aptitude," *Elementary School Journal*, XXXIX (November, 1938), 187–94.

"Based on one year of reading achievement, as measured by the Gates Primary Reading Test, an attempt was made to validate the prognostic value of the Detroit First-Grade Intelligence Test and the Metropolitan Readiness Tests."

215. GATES, ARTHUR I., and RUSSELL, DAVID H. "Types of Materials, Vocabulary Burden, Word Analysis, and Other Factors in Beginning Reading," *Elementary School Journal*, XXXIX (September and October, 1938), 27–35, 119–28.

Investigates effects of several factors on acquisition of reading ability.

216. GRANT, ALBERT. "The Comparative Validity of the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test," *Elementary School Journal*, XXXVIII (April, 1938), 599–605.

Compares ratings of first-grade pupils on Metropolitan Readiness Tests with their scores made two years later on standard reading tests. Correlates reading-test scores with ratings on Pintner-Cunningham test to determine predictive value of the latter and of the Metropolitan Readiness Tests.

217. GRANT, ALBERT. "An Analysis of the Number Knowledge of First-Grade Pupils According to Levels of Intelligence," *Journal of Experimental Education*, VII (September, 1938), 63–66.

Analyzes, according to levels of intelligence, the responses of 563 beginning first-grade pupils to a test of number knowledge.

218. HILDEN, A. H. "Training Kindergarten Teachers To Test Their Pupils on the Stanford-Binet Scale," *School and Society*, XLVIII (July 23, 1938), 123–24.

Describes a plan whereby three thousand kindergarten pupils were tested. The program consisted in training kindergarten teachers to give the tests, checking accuracy of scores, and determining reliability by having a psychologist retest a sampling of each teacher's group.

219. HILDRETH, GERTRUDE, and AXELSON, ALFHILD J. "Improved Visual Acuity Tests for Young Children," *Teachers College Record*, XL (December, 1938), 229–36.

Presents an adaptation of the Snellen E visual-acuity chart designed to sift out children needing more intensive examination.

220. HOCKETT, JOHN A. "The Vocabularies of Recent Primers and First Readers," *Elementary School Journal*, XXXIX (October, 1938), 112–15.

Presents a vocabulary analysis of six first readers and six primers published since 1935.

221. MEIGHEN, MARY, and BARTH, ETHEL. "Geographic Material in Third-Grade Readers," *Elementary English Review*, XV (December, 1938), 299–301.

Analyzes geographic references in twenty third-grade readers.

222. MILLER, WILLIAM A. "What Children See in Pictures," *Elementary School Journal*, XXXIX (December, 1938), 280–88.

Investigates a number of items that third-grade children saw in six pictures without the aid of suggestion or guidance.

223. POMEROY, JULIA E. "The Relation of Reaction Time of Five-year-old Children to Various Factors," *Child Development*, IX (September, 1938), 281–83.

Studies speed of reaction to an auditory stimulus of one hundred kindergarten children five and a half years old. Analyzes data in relation to sex, occupational status of parents, intelligence, reaction time of adults on a similar test, introversion or extroversion, and physical well-being.

224. RUDISILL, MABEL. "Selection of Preprimers and Primers—A Vocabulary Analysis," *Elementary School Journal*, XXXVIII (May and June, 1938), 683–94, 767–75.

Analyzes vocabularies of preprimers and primers and concludes that the sequence in which these books are introduced to the beginner is a significant function of his progress in beginning reading.

225. RUST, METTA MAUND. "Tests and Studies of Infants and Young Children," *Review of Educational Research*, VIII (June, 1938), 229–40.

Reviews the literature for 1935–38 dealing with the study and the measurement of children under six. Includes psychological scales; motor, mental, and personality development; and methods of observation and recording.

226. SHIRLEY, MARY. "Common Content in Speech of Preschool Children," *Child Development*, IX (December, 1938), 333–46.

Analyzes "verbal responses of preschool children who are not subjected to the common environment of a nursery school."

227. SIMS, RUTH L. "Concept Analysis of Primers and Preprimers," *Elementary English Review*, XV (December, 1938), 302–5.

Analyzes thirteen primers and preprimers to determine whether the concepts presented are familiar to the average child.

228. WOLF, THETA HOLMES. *The Effect of Praise and Competition on the Persisting Behavior of Kindergarten Children.* Institute of Child Welfare Monograph No. 15. Minneapolis, Minnesota: University of Minnesota Press, 1938. Pp. 138.

Studies factors both in the situation and in child personality that influence persisting behavior.

Educational Writings

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REVIEWS AND BOOK NOTES

EVALUATING NEW SCHOOL PRACTICES.—This study[1] of "the problem of appraisal of newer educational practices" in elementary schools was begun in 1932, at the time the author became a member of the staff of the Institute of School Experimentation of Teachers College, Columbia University. A report of the results obtained from the first two years of study was published in 1935 in a monograph of Teachers College (*Appraisal of Newer Practices in Selected Public Schools*). In the present volume the original data "have been supplemented by more inclusive descriptions of practices and the evaluation of a larger range of educational objectives" (p. iii).

The survey of trends in experimental and conventional elementary schools, which is reported in the first 150 pages of the volume, should be helpful to persons who have had only limited contact with the development of elementary-school practices in recent years. The survey is, however, of necessity too brief to permit anything like a thorough review of these practices.

To the writer it seems that the author has taken an unwarrantedly optimistic view toward recent progress at the elementary-school level. He makes no note of the fact that there are many persons who believe that advance in elementary-school practices has slowed up significantly in recent years and that the time is now ripe for the launching of a new program of experimentation. Since, however, the major purpose of the volume is to report on the use made of new appraisal techniques, it would not be proper to press further this point.

The inclusive plan for appraising the outcomes of newer practices in elementary schools is ably set forth in chapter viii. In brief, the author's thesis is that an adequate plan of appraisal must include the gathering of valid and reliable evidence on most or, if possible, all of the major objectives of instructional practices. The statement of this appraisal technique and the report of its application represent the major contribution of the volume.

The concluding six chapters (excluding the final summary chapter) report the findings obtained through various instruments of appraisal for evaluating the work of equated pupils in "experimental and conventional schools." Unfortunately the author does not report how he gathered evidence to show that certain schools were experimental and others were conventional. Such distinctions are often made on a superficial basis. Be that as it may, however, the re-

[1] J. Wayne Wrightstone, *Appraisal of Newer Elementary School Practices*. New York: Teachers College, Columbia University, 1938. Pp. xiv+222. $2.25.

sults of the study show a surprising and heartening consistency of superiority for the "experimental" schools in those objectives which the author considers fundamental to improved practices in elementary schools. These objectives include the understanding and practicing of social relationships, the expressing of creative abilities, the engaging in leisure-time activities, and the mastering of those knowledges and skills that are the essential tools of the educated person.

In summary, this study provides (1) a valuable review of recent developments in the practices of elementary schools, (2) much information that can be used to refute the charges of the critics that these practices result in inferior work, and (3) an outline of new evaluation techniques that should be beneficial in the further development of new practices in elementary schools.

C. L. CUSHMAN

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A ROAD FOR THE EDUCATIONAL LIBERAL.—It would be needless elaboration of the obvious to dwell on the fact that educational problems are indissolubly tied up with political and economic problems and that all belong in the field of the social. It seems almost as obvious that the political and the economic problems of social life are quite clearly distinguishable from each other and from educational problems—but only in regions near the social surface. Fundamentally, all three types of problems have a common origin in a deeper perplexity, one that has been vexing thinkers for more than two thousand years—the relation between the individual and the group. It is the question of individual interest versus social interest. How can the values of individual freedom and initiative be reconciled with the values of authority and social control? Should production be left to individual enterprise or be controlled by the state? Should our army be raised by appeal for volunteers or by resort to conscription? Should the school curriculum be based on the interests of children or on the demands of society? A totalitarian government, whether the dictator obtains his scepter from the "haves" or from the "have-nots" of the population, magnifies the power of the state. Only the democracies continue loyal to individual values and still believe in preserving them. And, whether we will it or not, as goes the state, so goes the school.

A little book[1] which has recently appeared accepts the position outlined above and wrestles manfully with the problem of so organizing education that both individual and social values may be optimally achieved. It is essentially the Doctor's dissertation of Paul H. Sheats at Yale University. Ordinarily no extensive notice nor protracted discussion of a Doctor's thesis would seem called for, even though it emanates from Yale. In this instance, however, an ordinary task has been performed extraordinarily well.

The author devotes most of his attention to the recent literature of a politico-

[1] Paul H. Sheats, *Education and the Quest for a Middle Way*. New York: Macmillan Co., 1938. Pp. x+190. $1.25.

economic nature, to the discussions of controversial issues and conflicting ideologies that have been so numerous since the economic debacle in 1929. He draws from a wide range of sources and liberally intersperses his discussion with excerpts therefrom. In fact, quotations are at times so freely employed as to give the impression of a skilful ordering of the thoughts of others rather than an orderly expression of the author's thought.

For the educator who desires to take the middle of the road, the author offers a program that may be briefly described. He advocates genuine equalization of educational opportunity and the devotion of more attention to the development of intelligence. The latter is indispensable as a means of adjustment to social change. Intelligence can be properly trained, not by imparting fixed dogmas, but by improving methods of thinking. Social conditions and the cultural tradition should be studied realistically, with tolerance and open-mindedness—in other words, with a scientific attitude. The author's conception of education "holds freedom in high esteem but does not deny the importance of discipline and control, order, stability, and authority" (p. 185). As this statement would indicate, he acknowledges the importance of both individual and social values. He anticipates the achievement of no permanent balance between individual and social interests but believes in a program of continuous experimentalism.

The book makes no pretense of probing beneath politico-economic situations into the psychological and the philosophical phases of the central problem. For example, no attempt is made to clarify the term "intelligence," to define a problematic situation, to analyze the conception of integrated personality, or even to determine the fundamental nature of truth and tradition in human experience. It is the reviewer's belief that assumptions regarding the nature of personality and the knowledge process are closer to the foundation of our thinking than politico-economic considerations and should be weighed, along with the latter, before any attempt is made to frame a comprehensive social theory, including a theory or a philosophy of education.

FREDERICK S. BREED

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A NEW SYNTHESIS OF THE HISTORY OF AMERICAN EDUCATION.—Several textbooks now available present somewhat different but perhaps equally valid interpretations of the history of American education. The theme of a recent treatment[1] is that the history of American education is the story of the accommodation of "the growing social organism which is America" to the changing environment. The relatively simple society of the early Colonial period was educated through family life, community membership, the church, the handicrafts, and numerous other agencies, as well as through the schools, which were few in number and poor in offerings. "With the advance of civilization, each

[1] Stuart G. Noble, *A History of American Education.* New York: Farrar & Rinehart, Inc., 1938. Pp. xvi+440. $2.50.

of these agencies has, step by step, surrendered its educative functions to the schools. . . . . The process of institutionalization, overcoming all impediments, has moved steadily forward" (p. xv). The history of this movement furnishes the thread of the narrative in Noble's book.

Consistency required that the author construe the term "education" to mean a process of social and individual development conditioned by environmental forces both within and without the school. As in the case of the individual, the education of a people is conditioned by two factors: (1) the capacity for improvement and (2) the environment. The first leads to an inquiry of the educability of the people and involves a consideration of racial strains and social heritage. The second leads to a consideration of environmental forces, "such as the frontier, changing social and economic conditions, and philosophical points of view represented in religion, the Enlightenment, the romantic movement, and modern realism" (p. vii).

The chapters dealing primarily with the environmental influences constitute the most significant contribution of the work. These chapters are interspersed throughout the volume in such a manner as to provide background for chapters dealing with educational institutions of corresponding periods. Thus, "The Heritage of English Culture (1607–1700)" provides a setting for "The Religious Motive in Education (1607–1700)"; "The 'Age of Enlightenment' in Colonial America (1700–1775)" sets the stage for "The Transition to Formal Culture and Practical Utility in Education (1700–1775)." A chapter on "The Romantic Era (1825–1860)" provides background for chapters dealing with the crusade for common schools, the rise of native institutions, the advent of new method, the curriculum, and the education of women. Another chapter, "The Drift into Modern Realism (1870–1935)," serves as background for sections on the more recent developments in the field of education.

The organization of materials is original. The chapters dealing with environmental changes may be read as a unit, as may those that deal primarily with educational development. The chronological arrangement, although not rigidly adhered to, is followed within sensible limits. The author has succeeded in telling a connected and meaningful story.

A commendable and, for the most part, a successful attempt to write clearly and simply has led, in several instances, to oversimplification and to less qualifying of certain statements than seems desirable. The complete accuracy of a number of statements may be questioned. The only serious typographical error noted changed the date of the famous Connecticut school law from 1650 to 1630.

On the whole, the book is well written; the material has been judiciously selected and much of it is fresh; the organization is a teachable one; and the interpretation is based on familiarity with the facts and an understanding of educational problems. The book may be read with profit by laymen and educators and may well serve as a textbook in teacher-training courses.

HERMAN G. RICHEY

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BETTER LEARNING IN BETTER PROGRAMS.—Two specialists have recently made an outstanding addition[1] to the rapidly increasing number of accounts of vitalized school work. As such it has a worthy place among the successors to the pioneer contribution in this field in the yearbooks issued by the faculty of Francis W. Parker School (Chicago) under the leadership of Flora J. Cooke, principal. These records of successful school practice are sounding the final knell to the pernicious custom of training pupils to "speak pieces" and "sing songs" for the purpose of putting on a show. They afford ample evidence that regular and worth-while school work can be, and should be, sufficiently interesting so that phases of day-by-day learning can be utilized for programs. Supervisors and teachers will find in *Creative Ways for Children's Programs* a wealth of experience in utilizing subject matter as means of interpreting special days and other normal interests of children.

The book includes a foreword, eight chapters, and a portfolio of pictures. Fannie W. Dunn states the philosophy of the book in the Foreword: "Rich and wholesome living calls for celebrations and sharing; there is beauty and zest and social satisfaction and re-creation wherever we may be, if we have but learned to see and react creatively to the resources of the environment" (p. v).

The Table of Contents is much more of a synopsis than is usual, the important subtitles in each of the eight chapters being shown, and the portfolio of pictures is articulated to the printed account by page references. Perhaps the heart of the book is chapter iv, "Creativeness in the Major Activities of Programs." Among the subheads in this chapter are "Activities of the Dramatic Type," "Exhibits," "Mock Conventions," and "Verse-speaking Choir Activities." Chapter viii records the program materials actually used in one county. It affords a wealth of proved illustrative materials, together with elaborate lists of reference materials for programs in connection with many phases of modern school work, such as transportation, Colonial days, songs and dances from other lands, Christmas, and other special days.

One of the best features of the book is a "Selective Bibliography," well organized and annotated. The simple, direct style used is also commendable, and there is everywhere unmistakable evidence of sound theory and effective practice. Both authors occupy strategic positions for the improvement of teaching in their own right, and they have drawn liberally on other recent contributions, especially those of their adviser, Fannie W. Dunn.

Users of this book may need to be on guard against two dangers: (1) the implications of the title and (2) unwise emphasis of the program. The wording of the title seems unfortunate, for "Creative Ways for Children's Programs" may suggest that *creative ways* are in the school in order that children may have programs, whereas exactly the opposite is more nearly the true view; that is, *creative ways* and *children's programs* are two of the several means by which effective schools should minister to the expression needs of children. Neither

[1] Josephine Murray and Effie G. Bathurst, *Creative Ways for Children's Programs*. New York: Silver Burdett Co., 1938. Pp. xiv+396.

should be *for* the other, least of all creative ways for *programs;* both should be for *children.* Perhaps a better title would have been "Children's Programs from Their Creative Work."

The text of the book is, for the most part, free from this limitation. For example, in chapter vii, "Educative Values of Creative Programs," the authors state, "The greatest educational value of the program is the creative work the children put into it" (p. 205).

The title of chapter viii, "The Program Materials of One County," may also be misleading. This wording might indicate that the reason for having the very valuable subject matter as listed, for example, "Transportation," "How Different People Work," is to provide material *for* programs; but the very first paragraph of the chapter will set the reader right in this respect: "Much useful subject matter and many different activities contain material for programs. As shown in the foregoing pages, both the activities and the subject matter usually belong to major units in the regular class work. *When the children want to share what they learn, they plan programs*" (p. 249—italics by the reviewer). A more accurate wording for this chapter title might have been "Program Opportunities in the Subject Matter of One County."

The possible danger of unwise emphasis on learning *in order to have* programs arises from the very convincingness of the book, for example, in chapter viii: "It is advisable for teacher and children, as they develop school activities, to build up from day to day an index of materials. This is helpful in developing programs and also for use in other activities" (p. 249). The chapter then shows how children may be set to searching through their school work for program opportunities to be catalogued and filed. This procedure is excellent in itself, but it might easily result in being careful to have programs *whenever you can find an opportunity* rather than having programs "when the children want to share what they learn."

These possible dangers can be readily avoided if the teacher is provided with equally effective aids in each of the several means of socialized sharing. Besides programs, these opportunities for expression include informal dramatization, pupil group conferences, school publications, shopwork, art, the dance, intramural games, bulletin-board displays, museum exhibits, school (or room) open house. *Creative Ways for Children's Programs* sets a high standard for this type of teacher help.

C. W. Stone

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A Comprehensive Guide for Teacher Selection in Large Cities.—Most research deals, of necessity, with a single and often a small phase of a large problem. Now and then, however, an investigator braves the charge of superficiality and the danger of inadequately supported generalizations and attempts to encompass a large area within the scope of one investigation. Coul-

bourn[1] has produced a study of this general type which deals with all the more important phases of teacher selection in city school systems. Because the study is comprehensive, it will be read with genuine interest by administrative officers of city schools who wish to check their practices against the procedures recommended.

The author bases his recommendations on present practices in the thirty-seven cities in the United States with populations of 250,000 or more, harmonizing these recommendations, where necessary, with authoritative expressions of opinion, which are grouped under nineteen criteria. The criteria include such generally approved statements as, "The selection of teachers should be based upon merit" (p. 13), as well as commitments concerning matters on which there is not complete agreement, such as, "The use of the written examination as a procedure in teacher selection is very limited and need not be a necessary requirement" (p. 20). The method of investigation used seems, on the whole, to be sound, except that the results of research are given too little weight in the formulation of the criteria and undue emphasis is placed on opinion. For example, although the numerous researches which have sought to isolate the factors that contribute to teaching success are inconclusive, Coulbourn speaks with assurance in discussing the application blank and the interview and the weighting that should be given to the information obtained by these means.

Aside from the weakness just pointed out, this study of teacher selection is most constructive and helpful. Many of the findings naturally verify accepted practice. Others, however, have not been so generally adopted. Following are a few of the latter type: (1) School systems should aggressively seek candidates for teaching positions by maintaining contact with training institutions and with other city school systems. Too much dependence is generally placed on unsolicited applications. (2) The usefulness of application blanks and rating sheets is determined, in large part, by the care with which they are made up. Constructive suggestions regarding organization and content are given. (3) Applications and letters of reference should be systematically rated by at least three competent examiners. (4) As a means of avoiding the obtaining of only a random impression, check sheets should be used by the interviewers as guides, and the sheets should be filled out immediately after the interview. (5) Medical examinations should be thorough and should be given by a doctor under the direction of the city school system which is considering the applicant rather than by a physician chosen by the applicant. (6) Uniform minimum requirements of years of training are recommended for both elementary- and secondary-school teachers, the suggestion being that, ideally, all teachers should have four years of general college work followed by two or three years of professional training. (7) The probationary period, which should generally not extend be-

[1] John Coulbourn, *Selection of Teachers in Large City School Systems.* Teachers College Contributions to Education, No. 740. New York: Teachers College, Columbia University, 1938. Pp. x+178. $1.85.

yond two years, should be a time during which positive efforts are made to promote teacher growth in service. If state laws permit, the teacher should be put on indefinite tenure as soon as he has demonstrated his fitness. Conversely, if a teacher proves himself incompetent within a short time, he should be notified in order that he may not be misled into believing that permanency of tenure lies ahead. (8) There should be an upper age limit of forty to forty-five years for new appointments. High standards of training will make a prescribed lower age limit unnecessary.

This study brings together in readable and immediately usable form the most authentic practices known today with regard to teacher selection in large school systems. It appears that, except for the type of administrative organization involved, most of the recommended procedures apply almost equally well to schools in smaller cities. Naturally the study cannot be accepted as the final word. Many of the areas considered will be subjected to more intensive investigation. The areas in which further investigation is needed are, however, made the clearer by the general survey that is presented.

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PROMOTING MENTAL HEALTH THROUGH PLAY.—Every person associated with any phase of the guidance of the growth and the development of children is today tremendously interested in the relation existing between the mental health and the play life of the child. John Eisele Davis,[1] of the Veterans' Administration Facility, Perry Point, Maryland, has attempted "to present the subject of play as usable material for the organization of effective mental-hygiene practices in school" (p. xiii). The subject is intriguingly set up in the Table of Contents under headings of "Play and Psychic Adjustment," "Play and Adjustment to the Outside World," "Play and Behavior," and "Happy Socialization."

The book is difficult to read. The author has repeated himself over and over in distressingly complex sentences entailing endless re-reading. The pages of the book are loaded with "circumcerebrations" and circumlocutions that make it questionable whether the interest of even the exceptional educator could be held.

The author's entire treatise is based on this introductory statement:

> It is fundamental to consider how disorderly and difficult is the struggle of the child toward maturity. He is expected to transform himself in a very short time from an egocentric animal into a socialized being. . . . . He must gradually cast aside the strong primitive urges which so powerfully drive him to live and to love in unconventional and even strange ways [p. xiii].

Much space and many words are wasted in elaborating on such statements as, "The observant teacher will note that the child's behavior is very different when he is with others from what it is when he is alone" (p. 5).

[1] John Eisele Davis, *Play and Mental Health: Principles and Practice for Teachers.* New York: A. S. Barnes & Co., 1938. Pp. xvi+202. $2.50.

The conclusions of the author are:

There are five important qualities in promoting a more ideal play: First, the experience should be thoroughly honest. Second, the particular play activity should be adapted to developmental age and interest. Third, participants should be given the satisfaction which comes from equal chances of winning. From the mental hygienic standpoint one-sided games are harmful. Fourth, play should be presented as a co-operative social experience rather than a physical struggle for individual dominance. Fifth, the objectives set forth should emphasize the group-winning ideal and lasting satisfaction which accrues to the lone individual when winning with the group [p. 190].

The hope of the author, but most certainly not a result made easier of accomplishment by reading the volume, is expressed in the final sentence: "The teacher of physical education should assist the child to form an acceptable concept of the most effective personality and aid him in establishing it and proving its validity in a co-operative and yet competitive society" (p.196).

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